NORMAN J. COLMAN, Editor and Proprietor. BENJ. BRYAN, Publisher.

VOL. XVI. ST. LOUIS, MO., SEPTEMBER, 1864. NO. 9.

THE VALLEY FARMER,

AN AGRICULTURAL, HORTICULTURAL AND STOCK JOURNAL,

PUBLISHED ON THE FIRST OF EACH MONTH, AT No. 97 Chesnut Street,

SAINT LOUIS, MO.

Terms—Always in Advance.

ONE DOLLAR PER YEAR.

Any one sending FIVE NEW Subscribers and FIVE Dollars, shall receive a copy one year Gratis, as a Premium. Remittances at our risk.

Advertisements—$15 00 per page; $10 00 per half page; and $2 00 per square of 10 lines, each insertion.

Address, BENJ. BRYAN, Publisher, 97 Chesnut St., Saint Louis, Mo.

DEEP CULTIVATION.

Twenty years ago, a prominent English agriculturist spoke of shallow plowing as one of the principal curses of British Agriculture, and the same writer in a recent communication to an English paper, says:

"I am sorry to be obliged to state, that in my opinion (formed from observation), four inches (solid) is still the full average depth of British agricultural pie-crust, in which plants are to grow whose roots would, if permitted, descend many feet."

We question if the "agricultural pie-crust" of Canada is any deeper on an average, and though it yields a large supply of food for man and beast, let it not be forgotten that there is something below the crust, which is capable of adding immensely to that supply. In point of fact, nearly every farmer in the country has a second farm, of the possession of which he lives in total ignorance—a new farm under the old one. Farms not only lie side by side, but in layers, and if the rage for broad acres could be displaced by a rage for deep acres, the amount of soil under cultivation might soon be doubled.

The objects of plowing are chiefly these:—To pulverize the soil so that the air can get into it, and the roots of plants find their way through it; to mingle the different portions of it as thoroughly as possible; to cover manures; to kill weeds; and to keep the surface open and fresh. By bringing fresh portions of earth to the surface, moisture is attracted from the air, and along with moisture, various fertilizing gases are absorbed. By keeping the pores of the land, so to speak, open, this processs goes on more thoroughly than it can do if the surface is suffered to grow hard and stiff. Deep plowing extends these benefits to a greater depth. It opens a larger proportion of the soil to the beneficial action of air and moisture, and furnishes a more roomy bed for plant roots, and a more capacious store-house for plant-food. It has, to some extent, the same effect as draining. It carries off more or less of the surface water, warms the soil, and renders it more easy of cultivation. Land thus tilled, is not so soon exhausted. The roots of grain, by penetrating farther, take firmer hold, and the stalks are less liable to give way and lodge. It also saves labor. It is less work to raise thirty bushels of wheat from one acre than from two or three, to say nothing of the zest and pleasure connected with getting a large instead of a small yield.—Deep culture is especially important in the growth of root crops. Those who have only a four-inch "pie-crust" to operate upon, have little idea of the size to which turnips, mangolds, carrots, &c., will attain, when they have

ample scope in a rich soil. The Rev. Mr. Smith, of Lois Weedon, on of the most noted agriculturists of the present day, gets his rows of Swedes to "shake hands" by their leaves at five feet intervals. He plows back all his topsoil, and having thus laid bare the poor subsoil, puts manure into it until topsoil and subsoil are alike rich. Dr. Dixon, of Rivenhall, once pulled up a parsnip with a vertical root 13 feet 6 inches long, besides a further piece left by its breaking off. This was in a bank of earth 20 feet deep, that fell over loosely when excavated. The roots of strawberry plants, grape-vines, &c., have been known to descend several feet in search of food and moisture. The exposure of a cold barren subsoil to the action of the atmosphere without the addition of manure, will in due time, render it capable of producing a crop. How great then must be the advantage of both loosening it up and dressing it liberally with dung. Gardeners understand this. A four-inch "pie-crust" will not raise choice vegetables. Hence the land is trenched to the depth of a couple of feet, or at least double-spaded, and manure worked in at a rate that seems almost wasteful, and yet is the very best economy of land, labor and money. Why should not the farm be as deeply tilled as the garden? The reply probably is, because of the expense. This objection would be true if we were confined to slow hand labor with the spade. But the same result can be attained by the use of team and plow. These are inadmissible to gardens because of the limited space for turning and working, and also because there are trees, plants, walks, &c., that would be injured by this mode of culture. But in an open field, team and plow can get down as deeply as a spade.—There are two modes by which greater depth of tillage can be attained. One is by deeper plowing with an ordinary surface plow, and the other by the use of the subsoil plow. The surface plow driven deeper down, throws the subsoil to the top—the subsoil plow follows in the furrow made by the other, and simply tears up and loosens the hard pan. It stirs and mixes up what is under the "pie crust." The change from shallow to deep plowing must be made gradually when it is accomplished with the common plow put in more deeply, and manure sufficient to enrich what is thrown up from beneath, must be applied. An inch at a time may be taken until by successive deepenings, the plow can be driven to the depth of nine or ten inches. The subsoil plow, an implement almost unknown in this country, will effect a gradual deepening of the soil without throwing the broken hard-pan to the surface. By loosening the subsoil so that the air can penetrate it, and particles of manure work, and wash down into it, it will soon improve and be assimilated to the topsoil. Stronger implements and heavier teams will be needed for the deeper cultivation we are urging, but the results in heavier crops will soon justify and reward the outlay. "A little farm well tilled" is better than a large one merely skimmed over, and every consideration enforces Poor Richard's maxim:—

"Plow deep while sluggards sleep."

The subject referred to in this article is of great practical importance. We have only touched upon a few of the points connected with it, but we trust the hints we have thrown out will awake thought and suggest improvement. —[*Ex.*

METEOROLOGY.

[An Essay read before the Meramec Horticultural Society, at its June meeting, held at Allenton, St. Louis, Co. Mo. By A. Fendler.]

[Concluded.]

These north-western gales are often very destructive on land, but their most astonishing effects may be seen at sea, as I myself have witnessed. On the 24th Dec. 1853, I left New York to sail for Laguayra, a seaport in Venezuela, South America. We were hardly out of sight of land, when a furious N.W. gale, a real hurricane, during a period of three days threatened our destruction. This storm was felt as far south as Laguayra about the same time, or soon after, a distance of 2,200 miles, though it was not felt in the atmosphere, but in the great agitation of the ocean; for a gale of wind is never known at the northern coast of Venezuela, nothing but the most gentle breezes are rustling there in the graceful leaves of the cocoa-nut palm.—But in more northern latitudes, where these fierce north-western winds strike the wide and unobstructed surface of the sea, there it is that we behold the mighty waters of old ocean lashed until, writhing with foam and mounting tower-high, they sweep destructively along in the shape of most enormous waves. Fleeing from the wrath of the fierce Norther, these waves take a direction towards the region of sunshine and calms. But such is the force of that mighty impulse of the air, that even long after they have escaped from the region of chastisement, they may be seen far away in calmer climes, leaping and roaring aloud in accents of thunder against the sunny beach of smiling islets, which forever are fanned by none but the most

gentle breezes. The single minded inhabitants of those peaceful realms not seeing any immediate cause of the unusual agitation, flock together in crowds and gaze with astonishment upon the excited sea, which at other times is so placid and so calm. Thus it is by the agencies of heat and gravitation, that even the soft air is vested with the most irristible power.

Tornadoes or those great whirlwinds which sweep from time to time in narrow but most destructive paths over some portions of this country, are entirely of a different character and different origin from the great north-western gales. The former have their origin for the most part in in the eastern portion of the Caribbean sea, go towards W.N.W. to the Gulf of Mexico, where they wheel around first in a northern course towards the coast of Louisiana and Texas, and then continue in a north-eastern and north-north-eastern course through higher latitudes, sometimes as far as Newfoundland. In what manner they originate, is not yet ascertained. They all pursue, however, similar paths, and have a whirling motion around a vertical or inclined axis, always uniformly from right to left, or against the sun.

The moving stratum of air near the surface of the earth, called wind, generally does not extend to a great altitude, but as we ascend high mountains in the tropics, we find different currents of air at different heights. Near the surface of the sea we have, for instance in Venezuela, the constant trade wind from E.N.E.; about 3000 feet higher we have the E. wind; still higher, at 5000 feet we have the S.E., and at an elevation of 8000 feet on the back of the Cordilleras, we meet with the steady southern current that flows off towards the continent of North America. Even in this country, at St. Louis, I have noticed sometimes besides the surface wind, three other different directions in the moving clouds at different heights, and when this took place, the lowermost stratum, that of the wind, was generally from the S.E.—the highest from W. It has been a subject of controversy which of the winds bring the rain. Some high authorities contend that the S.W. winds bring the rain from the Pacific ocean. To prove this doctrine, one of them at one time sent circulars to hundreds of farmers in the Western and South-western States, soliciting information from what direction the rain clouds came.—Most of them, if not all, answered that the rain clouds came from the S.W.—and so the authority thought his case proved. But although it is true, as all of us know, that in most cases the rain comes with the S. W. clouds, it does not follow that these clouds actually bring the moisture, of which they consist, from the Pacific ocean. We know, on the other hand, that the S.E. winds actually bring the moisture from the great Gulf stream, that warm oceanic stream, which carries off the over-heated waters of the Caribbean sea. When these warm vapors have accumulated sufficiently, and penetrated far to the West, then the lowering cold strata that come from the upper region of the S.W., in meeting them, gradually condense these vapors into visible and misty globulets of which clouds consist; and as this operation goes on increasas the south-western current proceeds towards N.E., the cloudy particles are condensed still more, and fall as rain-drops to the ground. If in this way the contention of the two currents, viz: the moisture-laden S.E. and the cool condensing S.W. winds, should last for 24 hours or more, we may have a continued shower for that length of time. The S.E. wind brings the humidity, the S. W. wind cools and condenses it. I have had experience enough during a long residence in different latitudes of the Western and South-western States, to testify to the correctness of this view. Hence, if a S.E. or E. wind has been blowing steadily for some days or weeks, and S.W. or western wind sets in immediately after, we may expect rain. This is a rule that may sometimes be more depended upon than the indications of the barometer. Although we keep this instrument in other respects in high estimation, we cannot regard it as an infallible prophet of the weather. The steadiness of the mercury at or above 29½ inches, is generally a sign of fair, steady weather; but when fluctuating much and sinking down to or below 29.4, it indicates rain; when it falls much lower it is accompanied by storm. This is generally the case, especially during winter, but not always, and we have to take other signs, such as the motion and direction of clouds and winds into consideration, to form a somewhat correct idea of the kind of weather we are going to have. Unfortunately it also happens, at least in this region, that the barometer, when it indicates rain, does it at the last moment, when in fact the rain is already near at hand. In summer time it is still more precarious and difficult to foretel the weather by the barometer—and sometimes it leaves us entirely in the dark.

Some persons try to predict the weather from the state of the moon, whether the full or new moon coincides with such and such a date, or

whether it moves in a larger or smaller orbit on the sky, and sets far to the N.W. or to the S.E. Also, whether the horns of the new moon point down vertically, or are inclined towards N. or S. These notions are not only found among nations of civilized countries of both hemispheres, but also among the Indians of our Western plains. One of the latter assured me, we would have very deep snow the winter following, because the horns of the moon pointed downward. The winter proved, however, to turn out less than an ordinary amount of snow on the plains. One would think that so widely extended notions cannot but rest on some good ground of observation and experience; but a little reflection will serve to convince us that they are fallacious. For the moon presents the same aspect all over the northern hemisphere in its phases and in the similarity of the circle it describes in rising and setting. But while we have an exceedingly cold winter or a very dry summer on this side of the Atlantic, they on the other side have generally a mild winter or a very wet summer. And even within the more contracted boundaries between the Mississippi and Atlantic we find, that in some States crops may suffer extensively from drouth, while in other sections they may get more than their usual amount of rain. Now if the moon is the cause of the wet, dry, cold or warm weather, the same cause ought to produce the same effects all over the region on which it acts. Furthermore if the weather doctrine of the moon was correct, it would be a very easy matter to foretell the weather for 20, 50 or even a hundred years in advance, for astronomers can calculate the orbit, position, aspect and phases of the moon for that length of time with great accuracy.

But I find that I have extended my remarks far beyond what I first intended. A full treatise on meteorology would, to do justice to so ample a branch of the natural sciences, fill a volume of no ordinary size. I will, therefore, conclude with a few hints on the importance of preserving the forest trees on the ridges of high hills and mountains.

In the first place, these wood-clad ridges keep the adjacent atmosphere above them cool, and the vapors in a state approaching that of condensation, from which vegetation can more easily extract the moisture it needs. I have seen the best illustration of this in the tropics. In the dry season, when most of the trees and shrubs in the valleys stand leafless from excessive dryness, when the lower regions are parched up with heat, the flanks and ridges of the neighboring mountains at an elevation of from 5000 to 8000 feet, are clothed with the richest green. Vegetation here is uninterrupted throughout the whole year. Trees are evergreens — they keep their branches and twigs clothed with leaves until death. Day after day, and month after month, the surrounding forest presents the same unchanged view in its deep green garment. Single leaves fall here and there one by one; and new leaves appear as slowly and gradually as the old ones die away —unnoticed and unobserved. The pleasing and hope-inspiring spectacle of returning spring, in the sudden appearance of the new and tender foliage, as seen in our temperate regions, is there unknown. In such mountain forests a sunbeam never touches the ground, and moisture and a cool temperature reign forever. The trunk of every tree and its branches are covered with Ferns, Lycopodiaceæ, Mosses, Hepaticæ, Lichens, Orchids, Bromeliads, and many exogenous plants too numerous to mention.

The soil in these forests is one entire mass of slender rootlets, most completely intermingled and interwoven, more than a foot in thickness, the interstices filled with a brown but imperfectly decomposed vegetable mold, which is kept in its place by the network of the rootlets. This stratum is covered with mosses and remnants of leaves, so that not only the ground but also the trunks and branches of trees act like a thick layer of sponges in retaining the water that either pours down in form of rain or settles more slowly in the form of mist. This water is allowed to trickle and sink down but very gradually, and is, therefore, a never-failing source from which are constantly fed the many little rivulets that hurry down the steep declivities generally into some narrow chasm, until they find a more level country.

The vapor of water contained in the air, spreads equally through the valleys as well as through the mountainous regions; but while in the former places the heat of the atmosphere keeps them very remote from the condensing point, so that vegetation cannot extract and appropriate them to its own use, in the mountainous regions on the other hand these vapors are cooled down to the condensing point and easily made use of by vegetation. Hence it is to our own interest to preserve the dense and humid forests on highlands, which are not only by the annual shedding of their leaves a never-failing source of fertility to the bottom land and the slopes of the valleys, but they are also the

means by which the flow of rivulets and springs are regulated and prolonged; while otherwise they would have dried up in times of drouth when they are most needed.

Summary of the Discussion of the Husbanding of Manures.

Hon. A. B. Conger, late President of N. Y. State Agricultural Society, sends us the following which we insert gladly:

I. Where sufficient has been reserved for arable lands, barnyard manure may be spread upon pastures and meadows under the following restrictions:

1. If spread early in the spring on pastures designed for *immediate* use, it should not be of the droppings of that species of domestic animals intended to be placed in the pastures.

2. It should never be spread upon meadows in the spring, as the coarser parts will be caught by the hayrake, and mixed with the hay, imparting to it a musty smell, if not tainting and poisoning it with fungus.

3. It may be evenly spread on meadows at any time after harvest, and lightly harrowed or bushed, especially if the after-math is heavy, so that the grass may not be smothered.

4. The weather should indicate the absence of high winds, the approach of moderate rains, or the presence of copious dews, so that the ammonical portion of the manure may not be lost.

5. On rapidly sloping lands a heavier top dressing should be applied near the summit, unless furrows such as are necessary in irrigation are made, so as to prevent the manure being washed with heavy rains to the bottom.

6. In winter no manure should be spread on either pastures or meadows when hard frozen, even when most of the atmospheric conditions above alluded to are present, *unless* the surface is or soon will be covered with snow, and then only on ground either level or gently rolling, so that in case of a thaw the melting snows may not render the distribution of the manure comparatively useless.

II. Under a system of rotation of crops, as supposed in the question, the husbanding of manures is indispensable to thrift in farming, and is to be regulated according to the supply of litter and the method of feeding adopted.

III. On farms whose principal staple is grain, the amount of straw is not unfrequently in excess of the feeding material reserved, and in such case it is necessary to spread it profusely over the barnyard, that it may be trodden down by cattle and sheep and mixed with their droppings. In such cases it is sufficient that the barnyard should be dished or provided with one or more tanks for the holding of the drainage of the mass, that fermentation should be allowed to proceed until the straw is disintegrated sufficiently either to turn the mass into heaps (into which the liquid contents of the tanks are to be conveyed by pump and troughs), or drawn out into the fields for spring and fall crops—of which method as generally in all departments of the farm service, the labor that can be applied is the discriminating test.

IV. Where from the scarcity of straw upon a farm, its high price in neighboring markets, or its being an element of food prepared for stock, it is necessary to economize its use, the system of box or stall feeding is to be resorted to, and the husbanding of manures is determined as the feeding is either of animals to be fattened or reared.

V. In the former case, neat cattle may be placed in boxes not less then 8 by 10 feet, the bottoms slightly dished with a view to drainage or being filled with muck or other absorbents, and the animals wintered with slight additions of cut straw as litter so to prevent the loss of hair and other cutaneous affections (which proceed from the heating of straw if too liberally supplied), and the whole mass of droppings, &c., left until removed to the fields.

VI. In the latter case, that of the rearing of young animals a like method may be pursued, but if their value will admit of a greater regard being paid to cleanliness, &c., the box should have a slatted floor of oak or other durable strips 1½ inch thick, 3 in. wide and ½ in. apart over a paved, clayed or cemented floor, inclined so as to carry the drainage of the box into gutters leading to a tank, and the manure removed often at least as once in six weeks, placed under cover of a roof either permanent, or of boards battened, turning on pins and moved by a long lever as in sheds for drying of brick, the liquid manure (if not used separately) being pumped from the tank and conveyed by troughs over the mass so as to prevent fire-fanging. If used separately the sheds are to be opened to occasional rains for the same purpose.

VII. The manure from animals stabled in the ordinary way is to be treated as last above described, and it is desirable that the manure shed should be constructed with access to it from a level below that on which the manure is deposited, so that in winter the manure may be carted upon lands plowed in the fall, the fresh masses placed on top, preserving those underlying from being thoroughly frozen.

VIII. When sheep are alone raised, they should be kept under sheds with small yards connected therewith, and their droppings may be treated either as in the case of fattening or growing animals, in the discretion of the owner.

IX. Where no portion of the manure is designed for top dressing of pastures, that of horses and neat cattle may be always advantageously placed under the same cover, their different capacities for developing heat, operating favorably against over-heating.

X. The value of straw as an article of food if cut up, mixed with feed, thoroughly wetted and allowed to stand in mass for a few hours so as to develop heat, or if steamed is, at its lowest price, worth at least twice as much for food as for the manure, resulting from its use as litter. Where beds of muck or peat exist on any farm they should be dished, and afterwards paved, so that by the use of these materials, when dried, the straw may be largely used as an article of food, a greater number of animals kept on the

farm, and greater masses of manure made, and with a material more valuable than straw as an absorbent and fertilizer, and for the preservation of the droppings of cattle, at a more uniform rate of temperature.

How to Build an Ice House.

Seeing an inquiry in regard to building an ice-house, brought to mind the fact of how few avail themselves of the greatest of all luxuries in hot weather, which is ice. I will now give you a plan of my ice-house, from which any one can build who can use a saw and hammer.

It has been built about ten years, and is all sound yet, with the exception of the boards on the inside, which will want to be replaced once in about five or six years. The size is eight by ten outside, six feet high. I took two-inch plank, twelve inches wide, for sills and plates, halved together at the corners. I used studs on the inside, and boarded up and down outside. The cracks should be covered with battens, to prevent the air striking the ice. The rafters should be five or six-inch stuff, boarded on the inside, and the space filled with either sawdust or refuse tan bark. The inside should be boarded the other way, to within a foot or so of the plates, which should be left until the space is filled. I place poles or scantling in the bottom, and cover with slabs, which will afford all the drainage necessary. The door should always be on the north side. The cracks in the north gable-end should be left open for the purpose of ventilation. I consider sawdust the best to fill the sides with, but tan-bark, turner's shavings, chaff, or straw will do.

It is more work to fill an ice-house the first year than it is ever after that. I like snow the best of anything to pack in—always filling the cracks between the cakes as solid as possible. I have taken out snow the last of summer just as fresh as when it was put in. The size of this house may be objected to by some, but mine holds enough for a large family, and also a dairy of twenty cows. I don't believe any dairyman who has had ice to use one year would be without it for ten times the cost.

One thing more about the house: It should be banked up at the bottom, for any circulation of air through the ice will melt it as fast as water poured through it.—[*Moore's Rural New Yorker.*

Too much work embarrasses. It will leave its sting behind. But work well done, will leave a satisfaction behind.

The Crops—From Villa Ridge, Ills.

Ed. Valley Farmer: The severe drouth prevailing through the country is beginning to be felt here. Corn up to the present time, (July 28, 1864,) has looked promising. The early planted on old land begins to suffer severely. That on new land and later planted, is looking more promising; but unless we have rain, and that speedily, the crop will be small.

We have harvested a larger crop of oats this season than we have had for four years. For the last three years they have been destroyed by the rust, and it seemed almost useless to sow oats with the idea of getting any in return; but the corn crop being short last season, there was not one farmer in ten that had corn enough to last him through the summer, so all who were fortunate enough to get seed, thought they would try oats once more: the result was no rust and an abundant crop.

This is no great country for wheat, or rather there was not much of it produced this season. Farmers having become discouraged by short crops for the last few years, have abandoned the wheat crop, and depend upon buying their bread. Considering the manner in which they manage the crop, the only wonder is that they raise any at all. If they get their land plowed an inch or two, the seed scattered over the ground, and brushed or harrowed once, they think that is scientific farming. The crop this season was better than common, but only a moderate yield.

The high price of molasses has induced many of our farmers to plant quite largely of sorghum. There was fully twice the amount planted this season that there was last. It is one of the most valuable crops we can produce, being well adapted to the soil and climate, and never failing to ripen the most unfavorable seasons, if planted before the first of June. It stands the drouth better than the corn, and with a little rain soon the crop will come out all right with us.

The failure of cotton last year deterred many from engaging in the cotton culture this season; but it will be remembered that last season was more unfavorable for cotton than any other for more than thirty years: therefore, it is not decided but what it can be cultivated here with profit. There is less planted this season than last, but more than the usual amount. It is at least two weeks more advanced than at the same time last season, and is doing well with every prospect of making up last year's losses.

Potatoes are small and few in a hill and not likely to be much larger. L. F. C.

THE PRACTICAL IN FARMING.

Ah! that is what Mynheer wants—the practical—a thing he has had ever since he has been farming. And what does he do—do with this practical? Why he runs it daily. You see it everywhere in his soil, which is run to death; in his horses, which are worked to death; and in his children, which, instead of going to school, are working, cadaverous, sorrow-faced brats, which look more like pigmy men than children. This man is a worker. And thus he continues till the grave swallows up his wretchedness. Then, there is an end to his "work." WORK, is the text with him; he was brought up to it. His children feel the rod in consequence.

And this man is but one—of a thousand, shall we say!—of tens of thousands scattered through the country. Where do we not find them? Are they not a pest? Is not such farming a pestilence? Wretched neighborhood! Wretched children! Wretched all!—Like a desert is the influence cast about.

Now, what does this man need? Of all things he needs book-farming: for you may rely he takes no agricultural paper—generally no paper at all—in fact he has no books save, perhaps, the Bible, which the matron reads alone. A little book-farming, how it would inspire and set things to right here. To prove this (if need be), these farms will all in time be reclaimed—they are gradually being improved now, and, what does it? Intelligence applied to farming; and that is just book knowledge, With this improvement follow the books, and agricultural works among them. The practical without knowledge, is the body without the soul—a carcass.

HARVESTING SORGHO.

Harvesting should not be commenced until the cane is ripe, unless there is danger of frost, which, as a general thing, with us, does not come until about the first of Ninth-month (October). I find that it is best to have it all stripped and ricked at the mill, butts down, before there is much frost; throw some boards or bagasse on the tops and let it snow or freeze and it will do the cane no harm. As soon as the outside thaws, work it off, and it will grind easier, clarify better, make better sirup and be more likely to granulate. The plan I have mostly used for stripping is, to take a common plasterer's lath and cut notches in it like mill-saw teeth, then strike it down through the hill. An active boy can, in this way, strip a large lot in a day. I think I shall try some of the patent strippers next fall if my crop does well. The cutting is done by a common corn knife. We haul on wagons, but I think a dumping cart or wagon would be preferable where the cane is bound. As a general thing, farmers are too fearful of losing a little juice in topping; it should always be cut below the top joint, as there no is juice of any value in two feet of the top.

No person should go to manufacturing molasses without good buildings to work in.

In the first place, choose a site, if possible, on a hill-side, where the boiling fixtures may be low enough to allow the juice to pass under the track and into the tanks and boilers without having it to handle. Build a grinding or mill-room 30 by 30 feet, 8 foot story; anything less will be found very inconvenient. I had to tare down a 24 by 24 room, last season, that was put up the fall before, and build one 30 by 30 which is very convenient. A house will be found very convenient to store tools in and will make an excellent wagon shed. For one end of this there should be a "lean to" as long or longer than the main building, and 12 or 15 feet wide, with ventilators in the roof to let out the steam as it rises from the pans. There should be a track laid, of scantlings, from the mill through the cane yard or shed, and a car on trucks, to roll the cane in on. This will be found to be much more convenient than carrying it in the arms. There should also be a sled to haul bagasse out on; indeed everything should be as convenient and handy as possible, and it will save at least one hand, which is quite an item in a season when wages are like they are now.—[*Sorgho Journal.*

SHINGLES RENDERED FIRE-PROOF.—Mr. John Mears says, in the *Boston Cultivator*, that he has prepared shingles in the following manner, and after an experience of eleven years, and using seven forges in his blacksmith shop, he has never seen a shingle on fire, nor has a nail started. The shingles are prepared in the following manner; "Having a large trough, I put into it a bushel of quicklime, half a bushel refuse salt and five or six pounds of potash, adding water to slack the lime and dissolve the vegetable alkali and the salt—well knowing that pieces of an old lime-pit, a soap barrel, or a pork tub, were not the best kindling stuff, and having long since learned, while at the Vineyard Sound, that hot salt-water whitewash would endure far longer than that made with fresh water, absorbing moisture, striking into the wood, and not peeling and washing off. I set the bundles of the shingles nearly to the bands, in the wash for two hours; then turned them end for end. When laid on the roof or walls, they were brushed over twice with the liquid, and were brushed over at intervals of two or three years after."

WHEAT—GOOD SEED.

I've seen the largest seeds, tho' reared with care
Degenerate, unless the industrious hand
Did yearly cull the largest. Thus all things
By fatal doom, grow worse, and by degrees,
Decay, forced back into their primevous state.
—[VIRGIL.

Too many of us are apt to think that we possess a sufficient amount of knowledge in the business we pursue, in and of ourselves, without reference to the almost infinite mass of mind around us, or that ceaseless research and activity that has existed before we came upon the stage of being, and which is now constantly affecting us.

It is true that great progress has been made in the art of cultivating the soil, and especially in regard to the labor-saving machinery and implements that have been introduced, and which have proved of the utmost efficiency. Improvements have also been made in many other directions—in buildings, stock, &c., and in the introduction of new and valuable vegetables and fruits. There are several important rules, however, well understood by the ancients, and observed by some of them, at least, with scrupulous care, that are very generally disregarded by us. One of these is in regard to the selection of seed.

Columella, who wrote about the time of our Saviour, in some remarks upon the selecting of the best seeds to propagate from, says:

"I have this further direction to give, that when the cornes are cut down and brought into the threshing-floor, we should even then think of making provision of seed for the future seed-time; for this is what Celsus says:—where the corn and crop is but small, we must select the best ears, and of them lay up our seed separately by itself."

The method, however, most farmers practice in reference to this important matter is far less scientific and rational; they do not hesitate to purchase of any one having the reputation of being a "good farmer," any kind of seed he may chance to recommend or have on hand. In this way fatal mistakes are often made, and lands which have been prepared with patient industry, are stocked with seeds which are nearly worthless, and sure to disappoint the expectations of those who have expended much time and capital in procuring and planting them.

An able writer, who is also a practical farmer, says: "I am convinced that a proper selection of wheat is indispensable, my crops having almost doubled in produce since I have raised seed of a pure sort. Those intelligent and superior farmers who have already made great strides toward pure crops by a careful selection of seed, must not expect so great an increase. But even to those I hold out decided hopes of improvement by the means I recommend."

There are a great many varieties of wheat. Le Couteur's collections embraced one hundred and fifty distinct sorts. One ear of one of these varieties he sowed grain by grain and suffered the plants to tiller a part. The amount of produce exceeded four ounces! Indian corn, when care is exercised in selecting the best formed, but not always the largest ears, and those which are the earliest ripe, and continuing the practice for a succession of years is found to be greatly improved, both as regards earliness of maturation and productiveness. The same remark applies with equal force to vegetables—roots as well as grains.

Attention to this subject will result in great gain to all who are cultivating extensive crops. —[*Ex.*

CURING CORN FODDER.—A considerable breadth of land has been sown in corn during the present season for fodder alone. More would doubtless have been sown for this purpose but for the want of proper knowledge how to cure it. A correspondent of the *Boston Cultivator*, who claims to have had considerable and successful experience in the matter, gives the following directions for curing:

All that is requisite in curing Indian corn is, simply to get the water out of the leaves and stalks. It is the water, or sap, that causes it to mould and spoil in the stack or mow. The stalks need not pass through any fermentation, any more than clothes, after they are washed, in order to dry them. The stalks need simply to be dried. That is all that is necessary. Now, if one has an abundance of barn-room, let the stalks be bound in small bundles and carried to the barn as soon as practicable after being cut, and let the bundles be set up, all about the barn. In a few weeks they will be so thoroughly cured that they will not spoil if put in a solid mow.

To cure fodder corn in the field, set the bundles in long shocks, so that the sun may shine in the former part of the day on the east side, and on the west side in the latter part of the day. When a storm is approaching set them in round stooks, and bind the tops neatly, with several bands, and cover them with hay caps. Should there be prospects of fair weather for a few days, set them again in long shocks for a day or two. In about a month, or so, they will be dry enough to be moved or stacked. If one has any caps, the stalks may be cured in the field with very little labor, and without any loss. Give fodder another trial this season.

Less land and more labor is one of the best mottoes of the farmer.

WATER WITCHES.

Ed. Valley Farmer: You will confer a favor if you will inform me whether to pay any heed to the Water Witches. I wish to dig a couple of wells on my place, and one of my neighbors, with a forked twig of hazel or peach or beech, pretends that he can always tell where a vein of water will be found. I wish to know whether you think it worth while to have him select places where the wells are to be dug.

A. C. D.

[Reply.—We hardly know how to answer your inquiry. We confess that we have but little faith in Water Witches—or that we formerly had but little faith. In two instances however, we wished to dig wells. One of our neighbors, an honest upright man, took his hazel twig and after walking around the spot where we wanted to sink the well could not find a vein; but some little distance from that spot, the hazel turned in his hand, and he told me to dig there; but I did not; I dug the well where I wanted it, and had to dig 60 feet for water, and none of my neighbors had to dig over 30 feet. In another case we wanted a well in our barnyard, and the "Witch" told us we could not get water there—but we tried and dug 63 feet. There are several wells within a few hundred yards, and none of them more than about 30 feet deep. We think hereafter we shall pay some regard to the advice of the "Witch." It will cost nothing.

The plan of the working of the "Witch" is as follows: The forks are taken, one in each hand, with the crotch standing upright—the palms of the hand turning outwards. The twig must be limber so as to turn and bend easily in the hand, and you must take hold of the forks as far from the crotch as possible, and still hold it upright. When held in this position, the "magician" pretends that the upright part will stand upright as he walks around, until he passes over a vein of water, when it will bend down or turn over in his hand towards the ground. We have seen it turn in this way. Why it should thus turn, we don't know. Neither do we know why the needle always points to the North. We know that loadstone attracts other metals, and it may be that water attracts the twig, and the slender twig pays it obeisance.—Ed.]

A Cat Hint.—When a cat is seen to catch a chicken, tie it round her neck, and make her wear it for two or three days. Fasten it securely, for she will make incredible efforts to get rid of it. Be firm for that time, and the cat is cured—she will never again desire to touch a bird. This is what we do with our own cats, and what we recommend to our neighbors; and when they try the experiment, they and their pets are secure from approach and danger henceforth. Try it.

A SPRING FOR STOCK.

Ed. Valley Farmer: I think B. S. Smith's idea of draining a piece of land and making the drainage furnish stock water—a very excellent one; but he does not take the best or cheapest method of building his cistern.

If he can procure brick it will be much cheaper to him, and make a better cistern to build it with brick; and I would advise him by all means to arch his cistern, and not trust to covering with timber. The brick may be laid in common lime mortar, in regular courses, but none should be used on the ends of the brick, but let the cement key into the spaces, nor should more than one coat of cement be used, (one is better than more if properly put on). The proportion for cement mortar is one-third cement and two-thirds sand. After the cement is on, make a wash by mixing pure cement and water, and apply with a white-wash brush.

If Mr. Smith will make the calculation as to what it would cost to quarry, haul, and *lay* the rock, as compared with the cost and laying of the brick; and also bear in mind how much more sand and lime he will require for his stone wall, than one of brick, and the fact that a stone wall will require at least three times as much cement as one of brick, and will not be near so apt to stick—he will see that it will be the cheapest and best plan for him to wall his cistern with brick.

I have just had a cistern built 10 x 18. It took 3000 brick, two loads of sand, about three or four bushels of lime, two barrels Louisville cement, and was put up and cemented in two and a half days. I give these facts as data for Mr. Smith to make his calculation by.

E. A. Riehl.

HOW TO ENRICH MEADOWS.

Mr. H. Lewis, of Frankfort, stated that "he had twenty-five acres of meadow that would yield annually a quantity of hay sufficient for the winter keep of fifty head of cattle. Some of his grass had already lodged, and he thought would not come up again. He should commence his hay harvest in about three weeks. This extraordinary fertility of soil and growth of grass has been effected by under-draining and by top dressing the soil with saw-dust in which was absorbed the liquid manure from his stock. He regarded the liquid manure of more value than the solid excrements of the animal. The conclusion had been arrived at by experiments and from observation. Stakes had been set in the pastures and meadows, to note the effects of liquid and solid manures—and the growth of

grass was in favor of those spots where the animals left liquid manures. Some few years since he commenced using saw-dust for the absorption of liquid manures and spreading the compost on his grass lands, the soil responding in a most remarkable manner. Latterly he had been using the dust at the rate of sixty bushels per week. The manure is hauled upon the land and spread as evenly as possible with a shovel or fork; it is then brushed and completely broken up and distributed in fine particles. This division and fineness of the manure is regarded of peculiar advantage, since the plants are better able to appropriate their food, and it reaches a greater number. About half the meadow is under-drained with horse-shoe tile, the drains being sunk three and one-half feet deep. On this portion of the meadow grows the largest grass."

DISPERSION OF SEEDS.

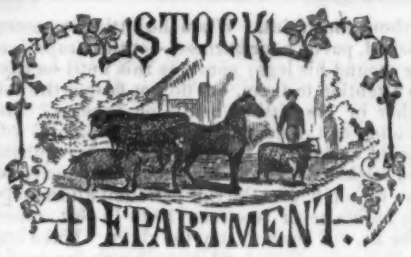
When the plant approaches the close of its allotted period of life, it is surprising with what care provision has been made for the continuation of the species, as if nature had determined to secure it, if possible, an immortality of existence upon the earth's surface. Hence not only the beautiful contrivances to effect the removal of the seed to spots favorable for its germination, but also the immense quantity of seed which the dying plant produces. On a specimen of Ricinus communis, the castor-oil plant, which the writer cultivated in his garden in Philadelphia, he counted ten clusters of pericarps, or seed-vessels; each cluster produced upwards of fifty pericarps, and each pericarp contained three seeds. The total number of seeds produced by the plant was therefore 10 x 50 x 3=1,500. Each of these seeds, be it remembered, contained an incipient repetition of the parent plant in the form of a young embryo. Supposing each seed to germinate and the plants to arrive at maturity, the product of the next season would be 1,500 x 1,500=2,250,000 seeds. In other plants, the first crop of seed is still greater. It has been calculated that the sunflower produces 4,000 and a single thistle 24,000 seeds the first year; therefore, the second year's crop would amount to 16,000,000 of seeds in the former, and 576,000,000 in the latter instance. How immense the amount of vegetable life which may spring from a single seed! Happily for mankind, every vegetable embryo is not destined to give rise to future progeny. Millions of seed or vegetable embryos are annually called into existence, but a variety of causes destroy their incipient life. Many seeds are used as food by animals, and a great many more decay. Were it not for the operation of these causes, by which the species is kept within prescribed limits, such is the fecundity of nature, that there can be no doubt that seed from a single thistle or dandelion would, in the course of a few years, be sufficient to cover with plants not only every square inch of the superficies of our world, but the entire surface of every other planet in the solar system.—[*Gardener's Weekly Magazine.*

TEACHERS INSTITUTES.

There should be a Teachers' Institute in every county. It is important that the teachers of a county should get together annually (and we will add monthly), to compare notes, to hear the experience of others, to obtain a clearer insight into their duties, to learn to love with a stronger devotion their noble calling. We want better, more zealous and earnest teachers; we want those qualified to instruct properly the young minds entrusted to their charge; we want teachers who are not violating the rules of grammar and pronunciation in nearly every sentence they utter; we want those who take a pride in their calling, and who are willing to labor long to qualify themselves for the profession. Teachers' Institutes assist in forming such teachers. Let them be held, and be sustained by the public liberally. Every citizen feels an interest in raising the standard of education. Without good teachers, we can't have good schools; and, without good schools, we can't have educated, intelligent citizens. Our farmers should feel the liveliest interest in this matter. Farming now requires a high order of intelligence, and sons of farmers should be properly qualified for their noble calling.

Nature produces most wood; but art most grapes, so it is with corn, which, in the South, its native place, grows to great luxuriance, but has little corn. The corn is grown in the North, where the climate disposes to form the kernel rather than the leaf. And yet art is but another principle of nature, as all growth—that of the berry as well as the branch—is natural. The one is wild extravagance; the other is wise application—that is, a wise directing of nature.

The best way to eradicate weeds, is to put your land in fallow, and give it thorough cultivation—three or four plowings, and numerous harrowings and cultivating. This will enrich your soil by making it thus mellow—and will prevent the weeds from seeing the sun, save when they are cut dead; and a plant unable to see the sun for a season and two winters, is pretty certain never to see it again, to say nothing of the cutting and bruising it gets. Besides, what a chance it gives to work your manure into the soil.



GRUBS IN SHEEP.

The *Practical Shepherd* gives the following in regard to this disease:

This fly (*Œstrus ovis*) is of a brownish color, ringed, and the wings prettily striped and marked. It attacks sheep in July and August. It is a larva or worm half grown, and nearly white. The insect, when it has attained its full size, is of a dark brown color.

In the months of July and August sheep are often seen gathering in dense clumps with their heads turned inward and their noses held down to the ground. If driven away, they run without raising their heads, or rapidly thrust them down again, as if they had some very urgent motive for retaining them in that position. Occasionally they stamp or strike violently with their fore-feet near their noses as if an enemy, invisible to the spectator, were assailing them at that point.

If the fly succeeds in depositing its eggs within the nostrils of a sheep, they are immediately hatched by the warmth and moisture, and the larvæ or young grubs crawl up the nose, finding the way to the sinuses, where, by means of the tentacula or hooks which grow from the sides of their mouths, they attach themselves to the membrane lining those cavities, and there remain feeding on its mucus until the following year. As the minute worm ascends the nose, the sheeps appears to be distracted with apprehension. It dashes wildly about the field, stamping, snorting and tossing its head.

The larva, after remaining in the sinuses through the winter and early part of the ensuing spring, abandons them as the warm weather advances. It crawls down the nose, again producing great irritation and excitement; drops on the ground; rapidly burrows into it; assumes the form of a chrysalis; and finally again hatches forth a perfect fly.

Many French and English writers consider these larvæ while in the heads of sheep, the causes of most serious evils and of frequent death. On the other hand, Mr. Bracy Clark and Mr. Youatt are not only disposed to doubt this, but they even suggest that these parasites may be placed where they are for the benefit of the sheep, particularly those in high condition—to save them from determination of blood to the head, by establishing counter irritation!

If a sheep die in the spring of the year, fair or poor, suddenly or lingeringly, with one or another set of symptoms, the popular belief generally traces the malady to "grub in the head." It is the convenient name which covers all the unknown fatal maladies of that season of the year. This probably arises from the fact that on making what may be termed the farmer's autopsy—viz., on splitting open the body and head of the dead sheep with an axe—the most striking deviation, if not the only one, from what is supposed to be the natural situation of things, which is discovered in the five minutes' scrutiny, is a quantity of large, fat, ill-looking worms in the cavities of the head; and our rapid practitioner at once decides that these are cause enough for any disease. His theory is that the grub bores through the walls which separate the nasal cavities or the sinuses from the brain, and that they produce death by attacking the latter organ.

Some farmers protect their sheep measurably from the attacks of the œstrus ovis, by plowing a furrow or two in different portions of their pastures. The sheep thrust their noses into this on the approach of the fly. Others smear their noses with tar, or cause them to smear themselves, by sprinkling their salt over tar. Those fish oils which repel the attacks of flies might be resorted to. Blacklock suggested the dislodgement of the larvæ from the head by blowing tobacco smoke up the nostrils—as it is said to be effectual. It is blown from the tail of a pipe, the bowl being covered with cloth. Tobacco water is sometimes injected with a syringe for the same purpose. The last should be prevented from entering the throat in any considerable quantity.

Wounds in Horses.—A correspondent of the *Michigan Farmer* recommends the following remedy for the healing of wounds upon horses:

Saltpeter should be dissolved in warm water, in such proportion as to be moderately strong to the taste, and blue stone added until the solution is *slightly* tinged. This, and nothing else, is to be used as a wash, two or three times a day. It purifies the wound, destroys the proud flesh, produces granulations immediately, and heals the wounds in a surprisingly short time. I have had a horse badly kicked and otherwise hurt, in mid-winter and mid-summer, and their cure was equally rapid, and afterwards no scar was visible. The wound requires no covering (flies will not approach it), and dressing it with a mop of rags tied to a stick, is very little trouble. Wounds do not require to be sewed up under this treatment; at least I never saw any advantage from it, as the stitches have been uniformly torn out.

TREATMENT OF COLTS.

Farmers are apt to go to one of two extremes with their colts—either to halter them or drag them about through the heat of the summer, on roads of all kinds, alongside their dams at work, or else to turn them out to run wild during the first six months of their existence, out of sight and hearing of human beings. Now, we take exception to both these methods of proceeding: To the first, because the limbs and feet of the young animal are tender and apt to be strained and bruised by being compelled to keep up with the dam, even when walking, for several consecutive miles. The young colt requires frequent rest, and should be at liberty to lie down whenever inclination prompts. When the colt becomes tired it drags on the halter, straining the cords of the neck, back and legs. It is often disadvantageous to allow the young animal to run too long without subjection, for when the attempt is made he will resist with great force and often with injury. At the risk, then, of some extra work, we advise that the colt is accustomed to be handled often, until he has no fear to approach persons, and when they always receive caresses, they are very ready to do so.

At two months old put on the halter, but allow the colt to go very much as he likes, occasionally drawing him towards you and caressing him. In two hours you will have imperceptibly broken him to lead. Then, when you tie him, do so with a halter he cannot break—a short struggle will satisfy him he is conquered. Never suffer any one to strike or yell at a colt; one such barbarious act will cause a day's work to overcome its bad effect. When first cleaning him avoid the head—then approach that part tenderly, and if he resists go to some other point. In a few moments return, and so continue till he submits with pleasure, rather, to being handled and rubbed anywhere and on any part. Your colt is then half broken.

Wean the colt at five or six months old, first teaching him while sucking the mare to eat oats. When taken from the dam confine the colt closely and put them out of hearing of each other for one week. During the *first* winter, feed daily two quarts of oats and all the hay the colt will eat. This, with good warm shelter, will keep him growing and improving. Don't turn him out in spring until the weather is settled and warm, and he can get a full bite of grass. The first year makes or ruins the colt. It is the most important of his life. Keep him *fat* the first year whatever you do afterwards, for this year decides whether he is to be a full grown horse or a miserable pony—no after-care can atone for neglect during the *first* twelve months. Good pasture (mountain if possible) the next season, and plenty of hay the next winter, with a quart of grain if convenient, will bring you a finely formed, powerful two-year-old. If a horse, alter him early, before fly-time, and turn to good grass.

In the fall begin to break by bitting gradually tighter each day—within two weeks you have his head as high and graceful as nature allows. The neck should be arched and the face vertical, without constraint. When the bitting is accomplished, put on your harness—let the straps dangle around his legs; continue this until he pays no attention to them, but do not fatigue the colt either in the bitting bridle or harness. The bending of the neck is exceedingly painful and should be done by degrees, the work requiring two weeks. While in the bitting bridle exercise him on a circle to the right and left alternately, the radius never less than 10 to 15 feet, otherwise he will learn to step too short. Make him walk, and walk fast while walking; no gait is more important, and our Agricultural Societies should offer premiums for fast walkers.

While harnessed, accustom the colt to wagons, sulkies, &c., by running them around and about him. Then harness to the sulky and lead him several days, until he no longer notices the pushing or jostling of the vehicle. Then let one get in while another leads, and so gradually get accustomed to all around him; on finding he is not hurt he will soon become quiet. Occasionally harness double with a steady quiet horse, but put on no load. Teach him to back by standing in front and pressing on the bit, calling out "back," &c. *Always caress when he has done his duty.* During the second winter hitch in double, making the other horse draw all the weight, and drive for a short distance (say one quarter of a mile at a time), alternately fast and slow.

Train your colts to three gaits in harness, the fast walk always, the moderate or road gait for distance, and the rapid trot. As, if we desired to make a man a good dancer, we would begin young while the limbs are nimble and the actions graceful—so, if we desire a fast walker and a fast trotter too, we must take the colt while young, and so when pressed he will take up the fast trot, instead of the gallop, so natural in after years. A horse can be trained so as to trot and not break up, as well as the boy can that he is to glide but never jump in the waltz. We do not pretend that horses will learn to trot equally fast, any more than all the boys will dance equally well, but all can be trained to exert every muscle in the trot, as well as in the run. Colts should never be driven fast for long distances; they become leg-weary, and cut themselves, or "interfere" as it is called.

At three years old the horse can perform very moderate work. At four, more still, but not until five should he be expected to do a "day's work," and better yet if deferred until six; most horses are ruined before five, by early and injudicious driving, or brutal treatment of some kind. The *farmer* can best use horses up to this age; all his work can be done by his brood mares and colts, and leave all his *matured* horses for market. One horse thus raised and trained is worth two such as we now often meet, and so the breeders purse will prove who tries it.—[*Am. Stock Journal.*

DEVON CATTLE.

The North Devon cattle are perhaps the purest bloods known, being an improved stock which has never been crossed with any other breed. They are a very valuable and distinct breed, possessing several characteristics peculiar to themselves, and of which they are very tenacious. They are esteemed for their fine proportions and their uniform red color, varying to a bright bay or mahogany color, no white on them excepting the brush of the tail, which is a sure test of the purity of their blood. When calves, the tails which form the brush are always darker in color than their bodies. By the time they are eight or ten months old, they are pretty white, which never fails in a pure Devon, and generally runs in the blood to a very great extent. Originally there were two varieties of Devons, possessing different properties of excellence. The South Devons were represented as heavy in the fore quarters, long and elevated horns, active, vigorous and lofty in their carriage, but rather light behind, and their tails somewhat heavy, their color light red.

The North Devon is medium in size, they are excellent for the yoke, but not generally esteemed as milkers, though rather famous for giving rich milk, which yields a very large amount of butter. Seven or eight quarts of their milk has made a pound of butter. All who have attempted to give their character, agree in the quality of their milk. They do not all give a large quantity of milk, though we have known individuals giving sixteen to twenty quarts, from which two pounds of rich yellow butter has been made; in fact, the writer once had a cow, that, from the milk of ten days, twenty pounds of good butter was made in the month of December.

It is a prevalent opinion among those who are not acquainted with the Devon cattle as a breed, they are so diminutive in size, and such poor milkers, that they are of little value to the farmer; this we think is a great mistake. They are, to be sure, small when compared with the Durhams and Herefords, but generally as large as the so-called common or native cattle; and when fed on common herbage, the cow will weigh from six hundred to eight hundred dressed, and the oxen from one thousand to one thousand four hundred pounds; and with extraordinary feeding they become very heavy and weigh well to their appearance. They mature early—hardly so ripe as a Short Horn or Hereford, but at four years old are fully ripe for the shambles, and at three good. He is a quiet feeder, with finely marbled and juicy flesh, well mixed with fat and lean, and proves remarkably well when dressed, and yields as much in proportion to the food they consume as any other breed.

"The cow," says Youatt, "is much smaller than the bull, and the bull considerably less than the ox. They are small in the bone, fine and clean in the limb, straight on the back, full in the chest, free from dewlap, prominent and bright in the eyes, keen in their looks, sprightly and active; and possess more of the appearance of what is termed blood in the horse than any other breed of cattle. Their horns are long and fine, tapering and yellow at the roots when young. Skin yellow, soft and mellow, hair silky and wavy or curled. The circle around the eyes, and flesh of the muzzle yellow or orange color. Their uniform appearance renders them very easy to match for labor, for which none can exceed them. They are docile and tractable, and alway command the highest price for working cattle. Their beef is of the best quality, being what *fleshers* term 'well mixed or marbled with fat and lean,' and proves remarkably well when dressed, and yields as much in proportion to the food consumed as any other breed."

Let us look about a little, and name a few enterprising persons who have imported and are breeding pure Devons. By far the best and most perfect herd of Devons which has ever fallen under our notice, were in possession of Mr. George Patterson, Sykesville, near Baltimore, Maryland.

The originals of these fine animals were imported about the year 1814. They were presented to Messrs. Patterson and Caton, two distinguished merchants, of Baltimore, by the Earl of Leicester, then Mr. Coke, Holkam, England.

Not being agriculturists, these choice animals met with indifferent treatment in their breeding, and for many years were neglected among the stock of their farms. But falling some years after in the hands of Mr. George Patterson, who readily saw their value for the locality and soil of his estate, he improved them by importing bulls from Mr. Bloomfield, (the principal tenant of Lord Leicester, and the real breeder of the fine stock of Devons for which his Norfolk estate has become so celebrated,) a most valuable bull, by which his stock was in a very few years brought up to a standard, excelled probably by few herds of Devon cattle in England—certainly by none in this country. These Mr. Patterson has continued to breed with great success ever since, improving their blood with continued fresh importations whenever it could be of the least advantage to him to do so. So fastidious has he been in his breeding, that for several years after he commenced, he steadily refused to part with a single animal to breed, until he got his herd to suit him in their general excellence, and he made his third trial of imported bulls from England, and the last one from Mr. Bloomfield's herd, above referred to.

THE DEVONS AS MILKERS.

As a breed the Devons are not considered great milkers, so far as quantity is concerned; but yet there are some exceptions; but for butter, as we hope to prove, they are equal, with the exception of the Alderney or Jersey cow, to any other breed. Like our common cows, there are poor, middling and good milkers amongst them. Instances are on record of Devon cows having produced an average yield of over two hundred pounds of butter, per cow, per annum, in a dairy of twenty cows.

The late Rev. Henry Colman in his "European Agriculture," says, "The Devons are, as a

breed, most highly and deservedly esteemed." Of their milking properties he remarks: "The North Devons have strong advocates as a milking stock. The most productive cow in butter which I have found was a Devon which for several weeks in succession, without extra feed, made twenty-one pounds of butter per week. The character of the owner places it beyond a doubt." He gives other cases corroborating the above. We will now give some proof of their milking properties nearer home.

Mr. C. P. Holcomb of New Castle, Delaware, had a Devon cow from whose milk, produced, in a single week, nineteen pounds of butter, and averaged fourteen pounds and twelve ounces of butter for twelve consecutive weeks.

Mr. Andrews, of Connecticut, says he made from one of his Devon cows, nine pounds and six ounces of butter in seven consecutive days in the month of January. Another cow of his yielded, in ten days, in the month of June, on grass alone, one hundred and twenty-nine quarts of milk, making thirteen pounds of butter in the hottest weather of the month. From this circumstance he was induced to try the ten succeeding days, which reached into July, and found the yield to be one hundred and thirty-nine and a half quarts, to a yield of fourteen pounds and one ounce of butter, allowing the yield to be same per quart as in the hot weather. As the weather was much more favorable, he was satisfied it would have yielded fifteen pounds.

The Devon cow "Ruby," owned by Mr. W. S. Cowles, of Farmington, Connecticut, dropped her calf in February, made in the month of April following, one pound thirteen ounces of butter per day, equal to nearly twelve and a half pounds per week.

The writer once owned a Devon cow which dropped her calf late in autumn, and from the 10th of December to the 10th of January, including both days, there were made from her milk, fifty pounds of well worked butter, nearly equal to two pounds per day. She was fed with good hay, roots, and buckwheat bran. We also had a Devon heifer at two years old from whose milk, in the month of June, was made one pound of butter per day, on grass alone, and not very good at that.

These cases, enumerated above, we think establishes the fact that the Devons, *as milkers*, do not fall behind the *crack* breeds for milking properties.

In our experience we have found great difference existing in all breeds of cattle; some cows run to fat, and those are apt to be spare milkers; the lean and well formed are apt to be good ones; some digest their food better than others, and these do better on the same pastures or quality of food; some feed faster and more constantly, and these are the best milkers, which run with others in the same pasture. There appears to be as much diversity among cattle as among men and women, who may daily sit together around the same table. No error can be greater than that of believing a cow can give rich milk upon poor, lean, spare diet. There must be in the food that which will supply the materials or ingredients of which milk is composed or else it must be impossible for the cow to produce it. The better the food, the better and richer the milk.

Many of the cows, whose surprising products have been spread before us in our agricultural reports, have had the advantage of great care and abundant and rich feeding either of the pasture or the stall. It could not be otherwise, the effects only followed known causes.—*N. C. Bement, in Stock Journal.*

CHAPTER ON HARD MILKERS.

We gather the following from the *Rural New Yorker*.

"La Fouche," Cambridge Valley, N. Y. writes:—"Insert the blade of a small pen-knife from one half to three-fourths of an inch into each teat, and you will find that the milk will flow free and easy without the least injury."

G. S. Dwight, Courtland Co., N. Y., writes: "I have used the simple insertion of goose-quill, with success. A large tapering hen's-quill will answer the same purpose. It may be necessary to repeat the operation; but, it is seldom the case. I have three cows now that I sucessfully treated in this way. Two of these cows could not be milked without tying before this treatment, but are as peaceable now while being milked as could be wished."

C. C. P., of Vernon, N. Y., writes:—Cured one two years ago, and it remains good yet. It was cured by milking the teat with both hands—a cure which I found in the *Albany Cultivator*, Vol. 2, (1854,) page 304. I will give it as it is there: Take both hands to milk one teat. With one press the milk down from the udder, and with the other milk it out; applying as much force as the cow will bear with both hands. The difficulty will gradually diminish, if sufficient force is applied in milking, until, in two weeks, an entire cure will be effected.

W. H. H. Keller, Steuben Co., N. Y., writes: "My father keeps a dairy and one summer he served eight cows in this wise:—Take a pen-knife or lance made on purpose, with an edge on both sides, put your thumb on the blade about one-half of an inch from the point, take the teat in your left hand and fill it with milk, then run the blade into the end of the teat up to your thumb, the edge cutting on both sides the hard skin that has grown on the end of that teat. The cow may flinch at it a little; the teat may bleed a few drops of blood, but no matter; it will spatter for a few times, but they milk as easy as any cow. The larger knife you use the easier they will milk; nor will they leak their milk as a great many will say; it is a certain cure every time. Try it, every one of you who have got hard cows to milk."

A Bully Team.

One of our agricultural exchanges speaks approvingly of the use of bulls as one of the working forces of the farm.

The *Germantown Telegraph* claims that they are easily broken to the yoke, and are much more valuable than oxen, in consequence of their much more active movements. It might have added with propriety, in consequence also of their superior hardihood and strength. We have long been of the opinion that the practice of regarding the bull as the "gentleman" upon the place is not an economical one; and in these hard times we think he should be made to do his share of the hard work. And this opinion was strengthened very much a few days since in witnessing the performances of a fine Jersey bull at the plow, upon the farm of the State Alms House at Tewksbury. No horse could have been more obedient to the driver's will than he, and as he led off in front of a yoke of oxen, we could not but think of the loss and waste occasioned by a neglect to make all these animals equally useful. We know that there is a notion extensively prevalent, that the working of a bull renders the stock liable to deterioration; but until we can be convinced that the children of the man who drives the bull are more liable to degeneracy than the children of those who live at their ease and despise labor, we shall not believe it. In this connection the following facts on this subject from a correspondent of the *Working Farmer*, will be read with interest:

"My experience corroborates the statements of the author as to the service of these animals when properly trained. I kept three horses, and yet most of my farm work, except plowing and dragging, has for two years past been done by a bull. He is used for all kinds of drafts, on the ground, on drag, in cart, in sleigh, in buggy, covered carriage, etc. He is used to cultivators, and rakes hay without a driver. The harness used is similiar to one in ordinary use for a horse, except that the collar and hames are inverted. He is more hardy than a horse, is guided with perfect ease and precision without reins, walks or trots, and is as kind and docile as a pet kitten. I think he will move as large a load as an ordinary horse.

He belongs to my son a lad of fifteen, who has broken and trained him. He will soon be five years old, is a fine animal, a cross of the Devon and Durham blood. My son is now training another, which will be two in a few months. He can be used already for almost any work, by being led. Learning to drive without leading, requires some time and patience."

Don't Stint the Colts.—At no time in the life of colts, do English farmers pay so much attention to these animals, or feed them better, than during their first winter; and these men contend that, if you inform them correctly how a colt is fed and cared for the first year, they will predict what kind of a horse he will make.

Just so soon as a colt is weaned, he should have a few handfulls of good oats, bruised, per day, a few pounds of cut straw, and a few pounds of cut hay. All else that he procures in the pasture will fill up the gap in his stomach (which occurs between meals), and he will not over distend that organ, nor his intestines, simply because the wants of nature have to a great extent been satisfied, or rather provided for, by feeding the articles just alluded to. Some persons may object to feeding colts in a generous manner, on account of the expense; but if good fodder makes strong, vigorous and healthy colts, and such colts make valuable horses, then I think such investment must pay well. Finally, the principal effect produced on the growing animal by an insufficient nutrition, is to hinder his best development. Therefore, I say don't stint the colts.—[*Dr. Dadd.*

Good Milkers.—It is an easy matter to distinguish a good milker. The farthest removed from the bull the better. As the male has no milking properties, and the female is devoted to them; and none so much as the cow; so we are to judge from this principle.

No person of ordinary intelligence would select a cow with thick neck, heavy bones and a bull-like disposition. On the other hand the true cow, the good milker is easily known by its thin neck, sometimes almost amounting to deformity (the case with one of ours); small bones; thin, sensitive hide; thin tail; and most of all, a mild, placid disposition, showing absence of animal heat, which consumes, or prevents milk from forming. A quiet, motherly face, denoting intelligence and domesticity, is what is wanted. The reservoir of milk, of course, must be large, or there cannot be stored a large quantity. A large, well formed bag, therefore is a necessity. A small udder is an invariable sign of a poor milker. The form and size of a cow are not always to be depended upon. The disposition is perhaps as much, if not more, than any other one point; some say than all other points. We remember a heavy-headed, coarse-bodied cow, but with the mildest of dispositions, as one of the best butter makers we knew. A good eater, always healthy. She made during the month of June 15 lbs. of the best butter a week; and gave a good flow of milk nearly the whole year round. Avoid the bull, and seek the farthest opposite qualities for the best milker.

To Cure Sweenie.—A correspondent of the *Rural New Yorker* says: "Take 1 pint alcohol, 2 ounces gum camphor, two ounces oil of spike, two ounces oil organum, two ounces oil of wormwood. Mix all together, and bathe the shoulder, and rub it in well once a day, and your horse will soon be better."

HORTICULTURAL.

Fruit from Woodburn, Ills.

ED. VALLEY FARMER: I this day ship you by express a box of fruit, containing specimens of the Sweet June, Golden Sweet, Early Pennock, Keswick Codling, Sops of Wine, and a pear without name; also, a few buds of said pear, which I hope will arrive in good order. You can present these to the St. Louis Hort. Society at their meeting, or make such use of them as shall seem to you best.

The Codling and the Early Pennock, I regard as profitable market apples, both are early and good bearers. The Pennock is large and handsome when fully ripe; but probably you are better acquainted with them than I am.

I regard the Sops of Wine one of my most profitable market apples. It is also a good family apple, although not sufficiently acid for some. With me it is admired as an eating apple when fully ripe, in proof of which I can bring wife, children, and all hired hands that ever worked for me, when it was in eating order, which is at least six weeks. It bears every year, and the fruit is always fair. Ripening as it does, gradually, some would think a drawback to it as a market apple, as it would require one to go over the trees several times, otherwise a part of the fruit would be too ripe perhaps, while much might be too green.

Mr. Hilliard, of Brighton, (this Co.,) was here yesterday, and has many trees in bearing. He always *shakes* his off the trees, going over them perhaps half a dozen times. This practice would ruin most apples for market; but this apple when slightly bruised, or picked by the birds, does not ordinarily rot as do most apples, but the affected parts dry up; hence you may shake it from the tree and then ship it without fear of their rotting in consequence of the bruise. I unhesitatingly recommend this apple to fruit growers for market and family use. I tried to get this apple noticed at the Mo. Horticultural Society's meeting last winter.

I also take the liberty of calling your attention and that of my Bro. Horticulturists of St. Louis, to the specimens of pears you will find in the box. This pear originated in N. H., in my native town, Cornish, on the Connecticut river, on the farm of an uncle. The original tree is now probably fifty years old, and this year bearing a full crop of pears. I regard it a profitable pear, and desire for the benefit of the public, to bring it to notice. You will perhaps remember that I spoke of it last winter at our annual meeting. It bears in about five years from the graft or bud. Bears well; ripens the last of July, or is then in shipping order. I shipped mine this year the 30th of July. There is money in it. It sold last year in Chicago at $18 per barrel. It comes into market you see, about one month earlier than the Bartlett. I do not regard it equal to the Bartlett for eating purposes, but when house ripened, it is very good and fine. Please give us your views of it. I know not yet what it sells for this year. I have no trees to sell, so please don't think that I am working to get rid of stock. J. HUGGINS.

[REMARKS.—The box came duly to hand. The specimens were inspected by several of our St. Louis Horticulturists; but, as our Hort. Society meets monthly, and they did not come seasonably for the meeting, they were not taken before the Society.

You sent a good selection of early apples. The "Sops of Wine" is one of the apples of our boyhood days. Many are the pecks of them we have hidden away in the hay-mow to ripen, so that we could have them convenient for eating when ripe. Our orchard was some distance from the house, and when we visited it we generally laid in a supply. It is undoubtedly a profitable market variety. We can corroborate your statement that it will bear bruises, for we always shook it from the tree, and the bruises would dry up. We had to gather them early as there were many mischevious urchins in the neighborhood, who always laid in a supply before they were fully ripened, and general took the lion's share or nearly so.

Mr. M. G. Kern, of Alton, has some trees on his farm, and he finds them productive and a profitable market variety.

We cannot concur with you in your views of the pear. It is very far from being "very good," or "good," or "second or third rate." It is dry, lacks character, keeps badly, as the specimens you sent speedily decayed. Its size is fair, but it is green, and is very far from being showy. It may sell well, but those who buy it will not buy it again. Its only recommendation is its season of ripening, as we know of no other variety coming in at this time. We have one tree that ripens at about the same time, but have never been able to identify the variety. If it bears heavily and sells well, and "pays," and does not come in competition with any better variety, the public will have it.

We should not have said so much, but you wanted our views and we have given them honestly, as we always shall as a public journalist, when they are called for. We shall always esteem it a great favor to receive specimens of fruit from our patrons. We want to know which are the best varieties so that we can recommend them to the public.

SQUASH BUG TRAP.

Ed. Valley Farmer: A good thing is never spoiled by being told out of season, so I shall give your readers a plan by which they can rid themselves of the squash bug, and be sure of a crop of Hubbard squash.

Early in the spring I found some large black squash bugs on my vines, and being very fond of the above squash, I went to work killing the rascals by hand, and after much labor thought I had cleaned them out, but upon examining my vines about a month after, I found my squash full of young bugs and unhatched eggs. I killed as many of the bugs as I could, and pinched out the eggs from the leaves and threw them away; but that I soon saw was an endless job, and made inquiry for a better and easier remedy. Dr. E. S. Hull, told me that he made a hole near the stem of the vine and laid a chip on it, and the bugs would go on the under side of it at night for shelter—and then next morning it was a very easy matter to jar them into hot water or soap-suds. I followed his method, and have saved my vines by it; and knowing the thing to work well, I give your readers the benefit of it, with this little piece of advice: Simply to do it early in spring, do it thoroughly, and kill all the bugs, and they will not have to make war upon their numerous progeny. R.

[Written for the Valley Farmer.]

The Ten-Striped Spearman.

BY BENJ. D. WALSH, ROCK ISLAND, ILL.

In the *Valley Farmer* for July, 1862, pp. 209, 210, I gave an account of this insect, with figures, which are here repeated. It had then

Fig. I Fig. II

been noticed by your correspondent, Mr. Murphy, to be very destructive to potatoes, tomatoes, &c., in Kansas. I have since heard of it committing similar ravages in Iowa. To-day I have received from Prof. Worthen, our State Geologist, specimens of the perfect insect, and also of its larva and eggs, with a statement, that "it is committing the most destructive ravages on the potato crop in the vicinity of Warsaw, Ill., so as to threaten the loss of the entire crop on many farms."

This insect must be carefully distinguished from several species of blistering beetle (*Lytta*) which also infest the potato. The latter are much longer in proportion to their width, being shaped exactly like the "blistering fly" of the druggists' shops, and their larva does not live on the leaves of the plant it attacks, as does that of the 10-striped Spearman, but under ground. One species of these blistering beetles that attack the potato (*Lytta vittata*), is striped lengthways with yellow and black, like the 10-striped Spearman—but it has only 4 or 6 black stripes, instead of 10. A second species (*Lytta atrata*) is coal-black. The other species is of an ash-gray (*Lytta cinerea*), and in some parts of the country is called, for what reason I do not know, the "abolitionist bug." This last is peculiarly severe upon the broad or English bean.

In 1862, I was unacquainted with the larva of this insect, and the figure which I then gave (Fig. 2) is that of an allied species. Prof. Worthen's specimens only differ from that figure in being a little shorter in proportion to their width, and in having a double row of black spots on each side of the body, and a transverse black stripe behind the head. From the analogy of other species, I said, in 1862, that the larva would "perhaps be yellow with black spots and markings on its body"—which turns out to be exactly correct.

We further ascertain from Prof. Worthen's statement, that the larva of the 10-striped Spearman, lives on the same plants which the perfect insect attacks, which was a point left in doubt by Mr. Murphy. The eggs are yellow, over 1-16th of an inch long, cylindrical, rounded at each end, and more than twice as long as wide; and they are attached in clusters by one end to the surface of the leaf.

The Taylor Grape.—S. Miller, of Lebanon Pa., has been making wine from this grape, which commends itself to those who have tasted it. One vine in its fourth year from a single eye stuck into the ground in the open air, produced last fall, one bushel of fruit, he says, from which were made "at least three gallons of wine now worth $4 per gallon." He asserts that a friend of grape experience, writes him: "When I have eaten nearly a fill of Delawares, Crevelings, &c., I top off with a hatful of the only real spicy grape we have—the Taylor." He hopes those who have this grape will not root it out nor graft it over as a worthless stock. He says "it must be trained different from many others; it should have plenty to do, for if headed back severely, as most others require, it will be in such a blast at time of blossoming, that they will be thrown off instead of setting."

Raspberries and Blackberries.

The *New York Tribune* says:—"The old canes have about performed their duty, and the new shoots are aspiring to overtop their parents. Remember, that the next year's crop will depend entirely upon the new canes. To insure a vigorous growth, cut out all the old ones as soon as the fruit has been gathered—they would never bear again—and unless an increase of stock is wanted, cut out a portion of the weak canes of the present year. This will throw all the growth into the remainder, and secure strong shoots for future fruiting. They are often left too crowded. If in large hills four feet apart, four raspberry, or three blackberry canes are quite sufficient for a hill. We prefer them in drills, to be trained upon a trellis, with single canes of raspberries fifteen inches, and blackberries twenty inches distant, the rows four feet apart for raspberries and six feet for blackberries. On the rich ground, well tended, the growth will be sufficient to fill the trellis, which need not be more than two wires or slats in height. When too aspiring, nip off the shoot at a reasonable height, to induce side branches. This will make a miniature tree, which, with the Lawton blackberry, has been known to produce six and even eight quarts per cane."

The Golden Age of Fruit-Culture.

Among the older inhabitants there are not a few who consider that the good days of fruit raising have departed. They remember when apple trees bent under great loads of fair fruit without a wormy or a knotty specimen; when the curculio was unknown, and plum trees were annually loaded; when even the apricot, which can now scarcely be raised, came down in golden showers from the trees with but little trouble in their management; and when the peach-crop was so profuse that, in addition to filling all the neighbors' baskets, the remainder of the crop had to be fed to the hogs.

Now it must be admitted there is some truth in this, with some error. We have at least a few fine things now that we did not enjoy many years ago. The more general introduction for example of the Bartlett, Seckel, Flemish Beauty, Louise Bonne, and Angouleme pears; a finer succession of cherries; strawberries that will yield as many bushels to the acre as potatoes, &c., are certainly an advancement on the past age.

But what is the reason of the deterioration already alluded to? Some ascribe it to the fact that insects and other depredators have found out our orchards, and are after the fruit in the same way that the rat keeps up with the march of civilization, even to the remotest ends of the earth; so the curculio, apple-worm, borer, aphis, caterpillar, canker-worm and their compeers now penetrate to every region where trees are planted, although early settlers got the start of them for a few years. Others think that the good varieties have "run out," or that the original fertility of the soil has departed, or that the seasons have become colder and that the crops and trees are winter-killed.

Most of these reasons have truth in them, and in order to restore the golden age we must meet these difficulties and conquer them. With regard to insects enough has been already said, so far as practical directions are concerned, for getting rid of them. But something more must be accomplished to induce cultivators to apply the remedies. The farmer will expend hundreds of dollars in fencing out intruders from his corn and wheat; but he thinks it a hardship to devote half an hour each morning to crushing the curculios or clipping incipient caterpillars' nests from the shoots. The great point is to bring the mind to the adoption of the truth that fruit, as well as other crops, is to be preserved by labor.

We may as well add, in this connection, that much may be done, by way of restoring the former smoothness of specimens, if the proper thinning on the tree, at the right time, is adopted. Yonder, for instance, is an apple orchard at mid-summer—most of the trees have twice as many specimens growing upon them as they can develop at full size and mature with perfect flavor. It will be found also that one-half or two-thirds of them are knotty. All that the owner has to do, therefore, is to bring out his ladders and thin out all that are bad or defective. He will do this many times more rapidly than gathering the fruit, because he has to take no pains with them. His crop will then be left in an excellent and fair condition, and be far more saleable in market than if disfigured by an inter-mixture of scrubs. These remarks will also apply to pears, with the addition that they are more likely to be stung and rendered knotty by the curculio than the apple.

Secondly, as to running out of old sorts. A few have become more liable to disease, but, as many more have been added in their place, the difficulty has been already fully met.

Third, deterioration of the soil. This has really been the case in many instances. The original vegetable mould diffused among the particles of earth, giving it looseness and friability, and rendering it eminently fitted for fruit growing, has been gradually worked out by cultivation; and another bad effect has been the result, namely, the setting of the soil to a more compact texture, and, where clay predominates, causing an increase of wetness in spring and drouth at mid-summer. The remedy for this difficulty is the addition of composts which consist largely of peat or vegetable mould, or of common manure containing much decayed straw. This addition will tend to loosen the soil and to restore its original richness. Where there is a natural drainage by gravel or rock beneath, or on hill-sides where there are no springs, this manuring, connected with good, mellow cultivation, will render the soil all that is desired. In other instances, thorough underdraining will be all that is essential, the tile

being laid equidistant between the rows of trees. We are not aware that the small roots of common fruit trees have ever filled and choked the tile of drains, so often occurring with roots of the willow and different forest trees. There are portions of the country where the soils are naturally heavy, where close observation has shown that the surface has actually settled some two or three inches. The earth has consequently become more compact, adhesive, and unfitted for fruit trees. In all such instances it can be restored only by under-draining, thorough cultivation, and the addition of the manures already mentioned.

Fourthly, increased coldness of the seasons. The thermometer shows that this opinion is erroneous, so far as mere temperature is concerned; but the clearing away of forests has exposed the surface of the country to a stronger sweep of the winds. This difficulty must be obviated by planting belts of trees; evergreens are most efficient, a single row or two being equal to a belt two or three rods wide of deciduous trees, and having small roots they draw less on the strength of the adjacent land. However, as timber is becoming scarce and valuable, it will often be found desirable to restore it by occasional belts of timber. The objection sometimes made by orchardists to the shelter of trees, probably arises from the fruit trees being planted too near them or in their shade. The well-known fact that the windward side of orchards is found more destitute of fruit than other portions, shows conclusively the importance of protection from winds.

In order to restore, therefore, the good old times when fruit was obtained so cheap and so excellent, we must remember that while it need not cost a great deal, yet that its price is eternal vigilance, connected with judicious management. It will not take care of itself—and the sooner this almost universal error can be eradicated the better it will be for both parties—namely, the trees and their owners. Let the requisites be well attended to, and make a proper selection of the best hardy sorts adapted to give a succession the year through, and we need not fear a good supply of all that is desired, and the golden age will be restored with compound interest.—[*Country Gentleman.*

TAKING UP BULBS.—The Editor of the *Gardener's Monthly* having advised his readers in July, not to take up bulbs until the foliage is quite ripe, says in his August issue that a friend informs him that the contrary is the practice in the bulb growing countries of Europe—that the practice with the best bulb growers—and which is considered one of the secrets of their trade—is to take up the bulbs as soon as the flowers fade, and lay them on their sides in some vacant place and cover them with a few inches of soil, where they are left to ripen. The bulbs are said to be much larger when so treated than when suffered to ripen where they grow, and the offsets are thrown off, making a clean round bulb. And the flower produced the succeeding season is said to be finer than when the root is ripened undisturbed. The Editor says his friend has tried this practice in this climate and confirms its advantages, above described. Let those who have bulbs make a note of it.

THE PURPLE CANE RASPBERRY.

We see our friend Dunlap of the *Illinois Farmer*, has learned from experience what we told him some time since, that the Purple Cane Raspberry is too soft for shipping. He thought very highly of it and expected to find it profitable to ship from Champaigne County, Ills., to Chicago, but says, in the August No. of his journal, that it is too soft to ship. For family use, it is a number one raspberry, hardy, productive, and quality good. But it must be used soon after being picked. We have had it in cultivation for 8 or 10 years, and if picked in the evening they will sour sometimes before market hours in the morning. We always pick early in the morning, and send them right to the city five miles distant, and they sell readily at a high price. But the St. Louis raspberry is of better quality, firmer and altogether a better fruit. We call it St. Louis because we know of no other name for it. It is hardy and a profitable market variety.

HALE'S EARLY PEACH.—I send to you a few specimens of Hale's Early, also a specimen of Troth's Early Peach. The latter variety being the earliest and most valuable market peach known for the last fifteen years.

We now have the Hale's Early, produced by a German in Ohio, that ripens so long before the Troth's Early that it must prove of great value to the Peach-growers throughout this country, by adding some two or three weeks to the first part of the season. The fruit I send you I grew in my orchard house. I took great care to give both kinds an equal chance: I placed them side by side so that they should receive the direct rays of the sun alike. The difference as to time of ripening you can judge. The first ripe Hale's Early fell from one of the trees on May the 8th, and they have continued to ripen from that time till now, this being the last picking.

ISAAC PULLEN, *Hightstown, N. J.*

The Peaches were superior, and fully sustained the excellent character of this variety we have so often given in our journal. It is undoubtedly the most valuable addition the peach list has seen for a long time.—[*Ed. Gardener's Monthly.*

The biggest crop of peaches that New Jersey has ever produced will come from that State this year. One farmer will send a quarter of a million of basketfuls to market. He owns 180,000 trees.

Grafts Controlling the Stock.

It was formerly a general opinion that the graft had complete control over the stock; if, for instance, the pear is worked on the quince, the stock had no power to change the identity of the pear, or even to vary in the slightest degree the character of the particular variety. An orchard of dwarf pears, containing 500 sorts, presents the distinctive character of each of these sorts, however slight the shades of difference, in complete perfection. In reasoning, however, on the principles of vegetable physiology, cultivators became much puzzled. They learned that water enters the roots of a tree, and passes upward through the wood in the form of sap until it reaches the leaves. Here it is spread out in a thin stratum to the light of the sun and to the action of the air; it here undergoes a great change, receives important additions of matter, and descends in the inner bark and forms successive layers of new wood on the outside of the former wood. The stem and branches of the tree thus continue to enlarge annually, and the bark must become stretched to accommodate itself to this enlargement—thus producing the longitudinal cracks seen in the bark of older trees, as the maple, basswood, and tulip tree; or in the loosening scales of the buttonwood, the peeling film of the white birch, and the horizontal streaks of the cherry, beech, &c. The successive layers of new wood deposited on the outside of the stem, are shown in an interesting manner by cutting a slit lengthwise and loosening the bark of a young tree, and then slipping in a piece of tin-foil between the bark and the wood, carefully replacing the bark by a temporary ligature. The new deposits of wood from the inner bark are now made outside the tin-foil; and by cutting down the tree after the lapse of several years, the annual rings will show the exact number of years that have elapsed since the operation.

But the puzzle of many is this: If the sap passes upward in the form of nearly pure water, and is manufactured over again in the leaves into the particular kind of wood which forms each different tree, why does the stock retain its identity—why does not the elaborated juice from the pear tree, when it goes down into the quince stock, change this quince to pear wood? If a bass-wood leaf manufactures the particular kind of wood known as bass-wood timber, and the leaf of the maple forms maple wood, why does not the leaf of the pear manufacture pear wood all the way down to the tips of the roots?

Investigations of more recent years have answered this question satisfactorily. It has been found that the green or living bark has a similar power of elaboration to that of the leaves, and its proximity to the new and forming wood preserves its perfect identity, even to the finest shades of varieties. For example, graft the Yellow Bellflower, with its light colored bark, on the dark stem of the Northern Spy; the leaves of the Bellflower form new wood, and send it downward in the form of liquid wood; the green bark of the Bellflower imparts to it the distinctive character of this variety, and the wood and bark are strictly those of the Bellflower. But as soon as the juice passes to the bark of the Northern Spy it is at once changed to Spy wood, and the distinctness of these sorts will be shown by the light bark of the one and the dark colored of the other. Again, graft on the Bellflower the dark shoots of the Early Joe, and on this again the light colored Sweet Bough. The leaves of the latter will furnish wood for the whole four sorts, but the respective bark of each will maintain its distinct identity. If a bud of each should now accidentally start and produce a shoot, the first would be that of the Northern Spy; the second, the Bellflower; the third, the Early Joe, and the fourth the Bough. In the same way the bark of the quince on the dwarf pear tree maintains its distinctive character, and the shoots which spring from the base are those of the quince, not the pear, although the quince may have been grafted when smaller than a quill, and have subsequently become half a foot in diameter.

There is, however, a certain degree of change effected by the graft on the stock, which the bark of the latter does not control. This is particularly observable in the character of the ramification of the roots. Set out, for example, three rows, with a hundred apple stocks each, taken at random, either similar or dissimilar in their character. Graft the first row with Roxbury Russet, the second with Bellflower, and the third with the Tallman Sweeting. After growing three or four years, the roots of the Roxbury Russet will be found to be few in number, strong and horny, and to have penetrated deeply into the soil, rendering them difficult to remove for transplanting. The roots of the Bellflower, on the contrary, will be small, numerous, and nearly horizontal, like those of the dwarf pear, and consequently very easy to dig up; the Tallman Sweeting will be found to have large, spreading, and strong roots. There are many other examples of a similar character familiar to every experienced nurseryman.

Mowing off Strawberry Vines.—At a late meeting of the Waltham (Mass). Farmers' Club, Dr. O. D. Farnsworth said he had been trying a new experiment with his strawberry beds. After his bed had ceased bearing, he mowed it closely and raked off all the vines, put on a little guano, and the result was that the ground was literally covered with the finest fruit. The bed which he experimented with is now five years old, and he intends to continue this course with it. He thought it would not be well to pursue this course if there were many weeds, as in that case it would be easier to set out a new bed. In setting a bed, he would trench 1½ feet deep and manure highly. The rows should be 3½ feet apart, and the plants 8 inches apart in the rows. Paths should be dug from 18 inches to two feet apart, and filled with meadow hay.

Peach Stocks.—M. L. D. says that on account of drouth, peach stocks will be too small to bud, and wishes to know whether it will answer to cut them close to the ground next spring, and then bud in August. We answer, Yes. We practice this plan on stocks of all kinds when too small to receive the bud.

[Written for the Valley Farmer.]

On the Mushroom and Other Fungi.

The months of August and September, are the two months when the wild mushroom in our fields and pastures do most abound. I say wild, because they grow spontaneously and without cultivation; and although they are cultivated largely and successfully in Europe—in this country its culture is but little attempted, and that with but partial and poor success. Indeed, this fine-flavored and nutritious esculent, seems to be but very little appreciated by our native population, except perhaps a few epicures, residents of cities who have been initiated into their good qualities, possibly in Europe, or by Europeans. The dislike, distaste, or prejudice, that Americans have for the mushroom, may arise from its likeness to, and association with, the toadstools and other repulsive and stinking fungi that abound in the woods and fields; yet, surely, a people that feast on frogs, turtles, and other repulsive reptiles, and esteem them delicacies, should not turn up their noses and look with contempt on this humble, but useful and delicate plant food.

The mushroom belongs to a large class or family of *cryptogamus* plants, called fungi or funguses, in which family are embraced all the toadstools and similar plants growing in the woods and on trees, decayed wood, &c. The scum seen on the surface of stagnant ponds, the mildews on the grape vine, cheese, and many other objects, are all different species of plants belonging to this extensive family.

While the English and ourselves, use only a few kinds of fungi as an article of diet or relish, (these are the mushroom, the champignon, the morel and truffle,) the Russians use as food about fifty kinds, and the Italians use them in immense quantities and of many different kinds.

Dr. Badham of England, in "A Treatise on the Esculent Funguses of England," says: "In France, Germany, and Italy, funguses not only constitute, for weeks together, the sole diet of thousands; but the residue, either fresh or dried, or variously preserved, in oil, vinegar, or brine, is sold by the poor, and forms a valuable source of income to many who have no other produce to bring into the market." In the markets of Rome many thousand pounds weight are annually disposed of, and an income of many thousand pounds sterling is thus derived.

There is also in that city a regular fungus market, with an inspector of funguses, who has regular and prescribed duties to perform. In the other large cities of Italy, the traffic in this article of food, is large.

The Dr. in speaking of the great loss of human food by the neglect of these plants, further says: "I have myself witnessed whole hundred weights of rich, wholesome diet, rotting under trees; woods teeming with food and not one hand to gather it; and this perhaps in the midst of potato blight, poverty, and all manner of privations, and public prayers against imminent famine. I have indeed grieved when I reflected on the straitened condition of the lower orders this year ('46) to see pounds innumerable of extempore beefsteaks growing on our oaks, in the shape of *Fistulina hepatica*, *Agaricus fusipes*, to pickle, in clusters under them; puff-balls, which some of our friends have not inaptly compared to sweetbread for the rich delicacy of their unassisted flavor; *Hydna*, as good as oysters, which they somewhat resemble in taste; *Agaricus deliciosus*, reminding us of tender lamb kidneys; the beautiful yellow *Chantarelle*, that *Kalon Kagothon* of diet, growing by the bushel, and no basket but our own to pick up a few specimens in our way; the sweet nutty-flavored *Boletus*, in vain calling himself *edulis* where there is none to believe him; the dainty *Orcella*; the *Agaricus heterophyllus*, which tastes like the crawfish when grilled; the *Agaricus ruber* and *Agaricus virescens*, to cook in any way and equally good in all."

These extracts are merely intended to show to what extent, and in what variety, the funguses are used in other countries, and how they are esteemed, and to call attention to the edible qualities of many other species besides the mushroom, and to assist in doing away with the belief, that every other kind but the common mushroom is poisonous; though it would be well to caution persons that are unacquainted with them, not to eat any other kind at least until the have learned what they are, whether edible and harmless, or not.

Now, the mushroom is the *Agaricus campestris*, which genera contains over twenty other edible species, and numerous poisonous ones. I am only writing to recommend the common one we all know to be good and wholesome food, and grows plentifully. In pastures where horses have been numerously kept, is the place to find them; the urine and dung of horses generates the spawn, and favorable weather brings up the ephemeral and evanescent plant. A long, dry summer, followed by the cool nights and rains of autumn, is the most favorable seasons for them; so as we have drouths nearly every summer, we nearly every fall have plenty of mushrooms. They are distinguished by the umbrella shape of their caps (*pileus*), also the pure

whiteness of the cap, and the delicate pink of the gills or under surface, also by the smell, which every one acquainted with them, will readily remember.

They spring up and attain their full size in a day and night; the second day they commence to shrivel and decay, the pink gills gradually change to brown and then to black, and in a few hours become full of maggots. In the moist air and mild sun of England, they grow as large as a hat crown, but the hot sun soon stops their growth here and they attain a less size.

For cooking purposes, they should be used when young, but for ketchup (of which they make an excellent article), they may be used much older, in fact no matter how old. There are numerous ways of cooking the mushroom, the skin of the cap must be peeled off and all made clean, and then they are ready to cook; broiled with a little salt and butter, they are delicious; used with meat, in soup and stews, they impart a delicious flavor; and are often stewed by themselves with a little flour and butter seasoning, and a small quantity of water. Stewed, broiled, fried, pickled, and as ketchup, are the various ways the mushroom may be used, dressed either with white or brown sauce.

C.

Gathering and Keeping Fruit.

It is becoming a well understood principle that pears are improved by being gathered before fully ripe. Some should approach nearer maturity than others. But early apples should be fully ripe, as a general rule before gathering. Late fall and early winter apples should not be eatable when picked, and all the late winter varieties should be gathered when too hard to yield to the pressure of the thumb, and always before heavy fall frosts. A dry time should be selected if possible. There will be a few specimens not yet mature, but you can afford to throw them out to save the best and main crop. When a good keeping variety begins to drop freely from the tree, as is sometimes the case, secure the balance of the crop that remains on the tree as soon as possible; but they should not be mixed with those on the ground—not one should be saved with those picked. Windfalls will not keep, for in addition to the injury sustained from the fall, they become heated by lying upon the ground exposed to the sun and hot air, and the ripening process already commenced is hastening it to a rapid decay.

No matter how hot the weather is, an apple is always cool while upon the tree, and in that condition should be taken care of, if we would have it keep in its most perfect condition for the the full development of all the delicious juices with which it is so abundantly supplied. How to obtain it in that condition will be my purpose now to show. We have seen that it must be carefully gathered before it is too ripe, as it is commonly termed; but I say before it is ripe, for when it is *ripe* it is fit to eat, and that should certainly not be the case with winter apples when gathered.

We have also seen that heat hastens the ripening process, and that cold retards it. Apples should, therefore, be kept cool, barely so as not to freeze. A minimum temperature of thirty-four degrees is probably about right, with as little fluctuation as possible.

It is not for the purpose of assuming to know more than the most of you about the best method of keeping apples, that I give the subject so large a space in this address, but it is to give it more prominence in our deliberations than it has heretofore had. I regard it as one of the points very much overlooked in all meetings of this kind.

Whether we regard the ripening process as a vital or a chemical action, it is quite sure that it should go on gradual and unchecked until all the good qualities are fully developed, and when the highest point of excellence is attained, then the fruit should be used. It is never so good as when just fully ripe; but is frequently eatable for a long time. Some varieties become dry and mealy, others tough and leathery. Others, by being kept very cool, will frequently remain in a very good condition for a very long time, or by the use of artificial means may be kept for an almost indefinite period.

I hold that the ripening process once commenced, goes on, no matter how cold, if frost is not present, slowly, perhaps, but uninterruptedly, until full maturity. Hence the importance of a cool cellar, which should always be dry and dark. It should be frequently aired, when the outside temperature will allow of it. Some varieties are much more sensitive to their treatment than others. The Winesap, for instance, which has a thick skin, may be abused a great deal in handling and but indifferently cared for in the cellar, and yet it will keep pretty well; that is it will rot but little; but, if kept close and warm, it is subject to a fungus that renders it scarcely tolerable to eat. But if it is kept cool and dry, all its best qualities are retained. It is also one of the varieties that does best kept on open shelves. The Belmont, on the other hand, which I regard as one of the best and most profitable apples, is very impatient of bad treatment. Its skin is smooth and thin, and flesh of a delicate texture. If roughly handled and kept in a warm room, it soon decays. If carefully handled and kept in a cool place, it keeps with very little waste till April or May. Indeed, it is, with me, one of the very best of keepers.—[*Trans. Ind. Hort. Society.*

[Written for the Valley Farmer.]

NATURE'S CHANGE.

BY MISS EMELINE CLARK.

The Summer now has passed away,
And all its treasures rare
Are lying in the dust to-day,
Or changed from what they were,
As all things earthly must be changed,
However good and fair.

Nature was weary of the dress,
Which Summer round her drew;
Though unsurpassed in loveliness,
She longed for something new;
So, from her, in a stormy mood,
The flowery robe she threw.

Now, Autumn, o'er her fickle breast,
With skillful fingers weaves,
A royal gold and purple vest,
Instead of verdant leaves;
She fills her hands with ripened fruit,
Her lap with garnered sheaves.

So wanton Nature seems to-day,
To sit in happy rest,
And, watching her, we scarce can say,
Which does become her best—
The flowing robe she cast away,
Or Autumn's closer vest.

Oh, Summer! be a tribute paid,
To thy departed hours—
For dust to dust, thy gifts are laid,
With other fairer flowers—
And Autumn, thou art welcome made—
Come, cheer our lonely bowers!

THISTLE-DOWN.

It takes nearly the whole season to perfect the thistle. Then, in mid-summer, its contents are let loose, and the thistle-down becomes quite an object of interest. The great heat is appropriate to its glittering silver.

I love the thistle-down. It suggests many pleasant thoughts; and will do to dream over, and follow on in its course, and think of its birth-place. Slowly swelling, it bursts its domicil, and, wondering, what new world this is, it waits awhile, and then, with the first whiff of air, it is off—for the first, in motion, except what little swaying to and fro it had on its parent stock, where its infancy was cradled. It then bloomed; and bees were humming round it; and great oxen browsing by, their sweet breath equal to its own blossom-scent. It feared not their tread; its thorns protected that—protected what? its blossom, and its maturing down. And there it stood, the thistle, the kingly pride of the field, hated, and yet dreaded by many.

The summer winds warmed it. It was quickened by the early spring sun, so that soon an infant thistle patched the ground. And it grew. The same air that fanned the flowers and the grass, fanned the thistle also. The sun nurtured it tenderly. It was the sun, too, that armed it, powerful in his beams, and a lover of such a hardy plant. What birds sang to it? built in it! Sheep were there; and lambs played harmlessly around it. Smooth was the ground, cropped close; but the kingly thistle was green and majestic—a tower of beauty in the field.

At last it bursts its shell, and gives to the world its numerous progeny. What trooping is there! The thistle has swarmed. And the air is a cloud of downs, not armed, but delicate—wonderful that such a thorny thing should produce such soft, such exquisite fairy-work.

Thus it is in the world. Nature knows, though we not always. Let us be patient as this thistle-down was patient.

It is at last on its wing, on silver wing, bearing its precious seed. It has entered on a great voyage; it has spread its little sail to the infinite. All is unknown before it. What a world below! for the first time it sees it. But the wind paddles it and bears it up—and higher, and higher. Nature had provided these wings—sails—for this venturesome voyage—expressly for this—and the little down trusts to this, and this wind; all the while safe is its seed.

It moves, as if a great eye, to see—to see the world—perhaps its future home—for like the bride, just wedded, it is on its untried way. And it moves, higher, and higher, like the lark, but has no song. At length it becomes a star to the gazer—steadfast too, so great is its height—a mere speck.

Now, what does it see! The circle of the horison—what you and I have hardly seen—the great circumference—rivers, lakes, towns, and little fields. But where to land, it knows not yet; the power of this wide air has it yet in hand.

Where now is its birthplace; the spring airs;

the song and the sunshine; and the early, sweet dew that nurtured it? Gone; left behind. Good bye to the old field, and the parent stalk! It will see them no more. Even the birds do not follow, and the butterflies—and yet they might. It is a lonely voyage, this. And where is the future home? Could the little down sob, it would now sob. But it has its precious seed to bear—to keep it company. And on—still on—with the same circle of the air and earth, and the same brooks, and lakes, and little fields—little they seem.

And now night comes: buried in the dark it will be. It has seen the sunset—it never saw it before—and this night is a strange thing.—Whither will its course be? and where will it land? In the sea, perhaps.

So dark the night! so slow its course! Is it standing still? is it resting? Ay, resting now. Here is a scent, a warmth—here is the ground, yes, mother earth; and here a field, so says the sun, now rising. And thousand other thistle downs are floating by. But here is my home, the little thistle says—here will I nestle in this soil. F.G.

USES OF ICE.

In health no one ought to drink ice-water, for it has occasioned fatal inflammations of the stomach and bowels, and sometimes sudden death. The temptation to drink it is very great in summer; to use it at all with any safety the person should take but a single swallow at a time, take the glass from the lips for a half a minute, and then another swallow, and so on. It will be found that in this way it becomes disagreeable after a few mouthfuls.

On the other hand, ice itself may be taken as freely as possible, not only without injury, but with the most striking advantage in dangerous forms of disease. If broken in sizes of a pea or bean, and swallowed as freely as practicable, without much chewing or crushing between the teeth, it will often be efficient in checking various kinds of diarrhœa, and has cured violent cases of Asiatic cholera.

A kind of cushion of powdered ice kept to the entire scalp, has allayed violent inflammations of the brain, and arrested fearful convulsions induced by too much blood there.

In croup, water, as cold as ice can make it, applied freely to the throat, neck, and chest, with a sponge or cloth, very often affords an almost miraculous relief, and if this be followed by drinking copiously of the same ice-cold element, the wetted parts wiped dry, and the child be wrapped up well in the bed-clothes, it falls into a delightful and life-giving slumber.

All inflammations, internal or external, are promptly subdued by the application of ice or ice-water, because it is converted into steam and rapidly conveys away the extra heat, and also diminishes the quantity of blood in the vessels of the part.

A piece of ice laid on the wrist will often arrest violent bleeding of the nose.

To drink any ice-cold liquid at meals retards digestion, chills the body, and has been known to induce the most dangerous internal congestions.

Refrigerators, constructed to have ice above, are as philosophical as they are healthful, for the ice does not come in contact with the water or other contents, yet keeps them all nearly ice cold.

If ice is put in milk or on butter, and these are not used at the time, they lose their freshness and become sour and stale, for the essential nature of both is changed, when once frozen and then thawed.—[*Hall's Journal of Health.*

A New Method of Making Bread.

Good bread is a good thing, and one not so easily obtained. A correspondent of the *American Agriculturist* says she can make good bread, and tells others how to do it. She says:

"Instead of protracted agony of twelve or eighteen hours, it will only be a pleasant exercise of a few minutes in making it—just two hours for raising—and baked in fifty minutes, and then out come the loaves, so round and light, so tender and sweet, the whole household will be delighted. The first thing, and last, in fact, is proper temperature, both while making it and in process of raising. Without heat, internal as well as external, fermentation cannot be rapid enough. Then heat two bricks to 100 degrees or more, and place the pan you make the bread in on them, and so knead and work in the heat with the materials. And now, though the great army of bread-makers stand up in flour-y array against me, and even shake their doughy fingers at me, I shall not wince or 'abate one jot.' 'Success is the test of merit,' as the world goes, and this past delusive notion that after bread is light once, it must forsooth be moulded over into loaves and set to work again, is all nonsense. It often induces sourness [illegible] multiplies labor, and takes [illegible]. Warm [illegible] have two tins well greased [illegible] in these days), and divide the dough equally. (I use two quart tins, which,

of course, requires two quarts of flour and over for a loaf,) and set them to rise by the stove on the hot bricks, with a piece of carpet over the bricks to moderate the heat, and then well cover with warm woolens. In two hours it will be rising like Aladdin's palace, and when fairly brimming full, place it in your oven, and you will soon have as delicious bread to eat as one ought to expect out of Paradise. I claim this as original, and only ask you to follow these directions and give us the result. Thus bread-making ceases to be the tax on time and patience it usually is, and the harrassing doubts and fears one usually goes through with while following the old method, are quite done away with. I could say much on the philosophy of baking bread, in adjusting the 'golden means' which, after all, is half. A peep into some of the closed ovens would, I fear, call out the exclamation of the dogs in Landseer's picture of 'too hot, too hot.'"

WOMAN CULTURE.

"There is nothing in the world," Mr. Willis says, "that we think so much of as we do of women. Our mother is a woman—wife, sister, and pretty cousins are women; and the daughters will be (Heaven spare them!) if they live long enough. And there is a love of women in general which we do not deny.

"A fine, magnificent specimen of the sex, full of life and health, a ripe red cheek and flashing eyes, is something that does one good to look at as she illuminates the humdrum sidewalks and every-day streets. A North River steamer under full headway, with colors flying, is rather stirring and inspiring—and we pull up our nag to see her pass and admire the swell she cuts. Comparatively, however, the steamer sinks into insignificance, or some other deep water, by the side of a well-kept, well-dressed woman. There is no rubbing it out; women are the ornament, charm, blessing, beauty, and bliss of life—(men's life we mean, of course). Any means, therefore, that can be devised for preserving them should be publicly made known. They are different from any other kind of fruit. You can not pickle them. You can not do them up in sugar and set them away in a cold room, with a paper soaked in brandy over their mouths. You can not put them in cans sealed up air-tight without injuring their form and flavor. Now, as men are so dependent upon women for their choicest blessings, a proper mode of preserving them becomes of great moment, and we are sure that the public will thank us for an infallible recipe.

"Have the feet well protected, then pay the next attention to the chest. The chest is the repository of the vital organs. There abide the heart and lungs. It is from the impressions made upon these organs, through the skin, that the shiver comes: it is nature's quake—the alarm-bell at the onset of danger. A woman may never shiver from the effect of cold upon her limbs, or hands, or head; but let cold strike through her clothing on her chest, and off go her teeth into a chatter, and the whole organism is in a commotion. One sudden and severe impression of cold upon the chest has slain its tens of thousands. Therefore while the feet are well looked after, never forget the chest. These points attended to, the natural connections of the dress will supply the rest, and the woman is now ready for the air. Now let her visit her neighbors, go shopping, call upon the poor, and walk for the good of it, for the fun of it.

"Keep away from the stove or register. Air that is dry or burnt, more or less charged with gases evolved by the fuel, is poison. Go up stairs and make the beds with mittens on. Fly around the house like mad and ventilate the rooms. Don't sit pent in a single room with double windows. Fruit will not retain its form or flavor in air-tight cans, neither will women. They need air. If the shiver comes on during these operations, go directly and put something more about the breast.

"Again, do not live in dark rooms. Light fades the carpet, but it feeds the flowers. No living animal or vegetable can enjoy health in darkness. Light is as necessary as air; and a brown tan is preferable, even as a matter of beauty, to a sickly paleness of complexion.

"This much in regard to the physical means for preservation. There are moral means important. Every woman should be married to an excellent man. Marriage, it is true, brings care and wear; but it is the ring that is worn that keeps bright, and the watch that lies still unwound, that gets out of order. The sweet sympathies involved in the family relation; the new energies developed by new responsibilities, the new compensation for all outlays of strength, bring about a delightful play upon the heart and intellect, which, in their reaction upon the body, produces an effect that is nothing less than preservation. Then there is a higher moral power than this—one which we speak of soberly and reverently. No one is completely armed against the encroaching ills of life who has in the heart no place for religion. The calmness, the patience, and the joy and hope

that are in possession of that woman whose heart is right in its highest relation, can never fail to preserve and heighten every personal power and charm that she possesses.

"There! you have the recipe. Some of it is in sportive form, but is not the less sober truth. It has within it a cure for many a disease—the preventive for more. It might be made longer; when we see its prescriptions universally adopted, it will be time to bring forward the remainder."—[*Phren. Journal.*

THE BRAVE AT HOME.

BY T. B. READ.

The maid who binds her warrior's sash
With smile that well her pain dissembles,
The while beneath her drooping lash
One starry tear drop hangs and trembles.
Though Heaven alone records the tear,
And fame shall never know her story,
Her heart shall shed a drop as dear
As ever dowed the field of glory.

The wife who girds her husband's sword,
'Mid little ones who weep or wonder,
And gravely speaks the cheering word,
What though her heart be rent asunder—
Doomed nightly in her dreams to hear
The bolts of war around him rattle,
Hath shed as sacred blood as e'er
Was poured upon a field of battle.

The mother who conceals her grief,
While to her breast her son she presses,
Then breathes a few brave words and brief,
Kissing the patriot brow she blesses,
With no one but her secret God
To know the pain that weighs upon her,
Sheds holy blood as e'er the sod
Received on Freedom's field of honor.

AN EYE FOR NATURE.

There is a green field in the distance running up the mountain, and met half way by the trees—a dense wood. The trees are dark, but the grass is a light green, and clean. The shower has just washed it; it has been washed frequently during the week. Now the sun is out, nine in the morning, and presents it to full view. Sometimes the opposite hill, east, is just so tinged by the evening sun. Once it came out of a dark cloud, just as it was dropping behind the west hill. It gave one clear look—we shall never forget it—lighting up the whole hill, wood and all, and, with a deep, dark bronze light. It seemed almost unearthly, as if a volcano had shone out, or a large orb aside from the sun. These are mountain views, and they please exceedingly, It is well to have them with you, surrounding you. They change their phases—so that between them and the valley there is interest enough to the man who has an eye for nature. But an eye for this requires some refinement. The boor has nothing of it; he scoffs at it. So does many a man who thinks he is not a boor; but is as good as his "fellows;" and that is true—for such a man has many fellows. He will not deny but that a rose has nice colors, and smells sweet. But that is all. If roses were dependent upon him, they would die out, become extinct.

Examine him closely, and you will find out this man has not read much—is rather a coarse man, with anything but an amiable disposition—though he may be honest, he is not an agreeable member of society, and is looked upon with suspicion.

Not to appreciate the magnificence of nature around him! As if the Creator had made all this, *not* to be enjoyed. What was the eye made for, if not to see things? Was it made merely to see money, to see beefsteak, to see your bottle-companions? The rose has its color, so that we should admire it; so has the sky. The great enjoyment of refined society, is what the eye presents to the mind—the eye more particularly than any other source—it is the luxury of civilization, and one of its distinguishing features. We go even so far as to represent nature—as is done on the canvas, and on the poet's page, but most of all on the retina of the cultivated man's eye direct from nature.

But the ignorant man is not so wholly to blame as we think; his education was neglected. Had he been educated, this would have been different. Hence, as education increases, a love of nature also increases. The uneducated man is more unfortunate than to blame. He misses the good by not having been qualified for its enjoyment. It is therefore that Wordsworth has, comparatively, but few admirers.

BEAR WITH LITTLE ONES.—Children are undoubtedly very troublesome at times in asking questions, and should, without doubt, be taught not to interrupt conversation in company. But, this resolution made, we question the policy of withholding an answer at any time from the active mind which must find so many unexplained daily and hourly mysteries. They who have either learned to solve these mysteries, or have become indifferent as to an explanation, are not apt to look compassionately enough upon this eager restlessness on the part of the children to penetrate causes and trace effects. By giving due attention to those "troublesome questions," a child's truest education may be carried on. Have a little patience, then, and sometimes think how welcome to you would be a translator, if you were suddenly dropped into some foreign country, where the language was for the most part unintelligible to you, and you were bursting with curiosity about every strange object that met your eye.

[Written for the Valley Farmer.]

SMILES.

(INSCRIBED TO MISS ANNA A. K****, ST. LOUIS, MO.)

Earth would ever seem benighted,
Did not smiles our hearts beguile:
On the face of woman lighted,
Oh, how winning is each smile!
Making each radiant feature charming,
With their smiles of sunny light;
All the face of nature warming,
As the sun decends the night.

O'er the soul its influence shedding—
That both win and charm the while,
Lovely woman's face o'er spreading—
'Tis the sweet and sunny smile;
To our sympathies appealing—
When from woman's eyes they start—
Every deep and tender feeling—
Tears may waken in the heart.

When woman's charm is gone forever,
Then will smiles her lips forsake:
From it you its worth dissever—
From the rose its perfume take;
Earth would ever seem benighted,
Did not smiles our hearts beguile:
On the face of beauty lighted,
Oh, how winning is the sweet smile.

JEFFERSON.

FRANKLIN'S THIRD MAXIM TO MARRY BY.—Chastity, modesty in word and deed and even in thought, is so essential, that without it, no female is fit to be a wife. It is not enough that a young woman abstain from everything approaching towards indecorum in her behaviour towards men; it is, with me, not enough that she cast down her eyes, or turn aside her head with a smile, when she hears an indelicate allusion: she ought to appear *not to understand* it, and to receive from it no more impression than if she were a post.

Babylon was 60 miles within the walls, which were 75 feet thick, and 300 high, with 100 brazen gates. Nineveh was 15 miles by 9, and 40 miles round, with walls 100 feet high, and thick enough for three chariots abreast. Thebes, in Egypt, presents ruins 27 miles round. It had 100 gates. Carthage was 25 miles round. Athens was 24 miles round. The Temple of Diana, at Ephesus, was 425 feet long and 225 broad, with 127 columns, 60 feet high, to support the roof; it was 200 years building. In the ruins of the Temple of Balbeck, in Syria, are stones 30 feet long and 9 deep, and three are 58 feet long and 12 deep.

An experiment was lately tried in England to ascertain how quick a railway train under full headway might be stopped. It was allowed to attain a speed of fifty miles an hour, when three brakes were applied and the steam shut off. It came to a dead stand after running about 500 yards; being 60 yards more than a quarter of a mile.

AUTUMN.—While the birds are leaving, the flowers are fading. But they will linger with us for many a day yet, the later varieties. We have at this time, those of gold and purple of more than imperial splendor. Both varieties have crept between the little mounds by the pine, and as if bathed in tears at early morn, bow low over the sleepers. The sight of them touched me, for by the graves in the heart the never-fading love for the early dead weeps its tribute tears. Sturdy, luxuriant, and reaching out to drop a benison of rain-drop and dew, the pine blooms on. In the winter, thank God, it will still wear the hue in which it stood with us, as one of the family group by the open graves. Sturdy and luxuriant it may stand, and wear that fadeless green through the years when an older and more weary frame shall be lowered to its rest beneath its kindly shadows. And with it, will there be any aside from "kith and kin," who shall stand and with raining drops, make greener the sod that shields us from the storm of battle? Let us believe so, for that is a desolate grave where no friend has a tear to shed.—[*Wisconsin Chief.*

MY MOTHER.—It is truly said—the first being that rushes to the recollection of a soldier or a sailor, in his heart's difficulty, is his mother. She clings to his memory and affection in the midst of all his forgetfulness and hardihood, induced by a roving life. The last message he leaves is for her, his last whisper breathes her name. The mother, as she instills the lesson of piety and filial obligation into the heart of her infant son, should always feel that her labor is not in vain. She may drop into the grave, but she has left behind her, influence that will work for her. The bow is broke, but the arrow is sped, and it will perform its office.

THE TEETH.—The teeth are divided into three classes, each class fitting us for a different kind of food: First, The incisors, or cutting teeth, being eight in number, four top and bottom; those of the upper jaw being larger, and falling over the under ones in closing the mouth. The office of these teeth is for dividing and cutting the food, by bringing it between the surfaces of the sharp edges. Second, The canine teeth so called from their resemblance to the dog's tooth, are placed on each side of the incisors, making two in each jaw. The intention of these teeth is to lay hold of substances, and are peculiar to all carnivorous animals, and of which man is considered to be the most harmless. Third, The molars, or grinders, are ten in each jaw, and serve to fit the food for the stomach, by dividing it into minute portions, or pulp. Thus, it will be seen that Nature designed man should partake of each of the foods common to the carnivorous, herbivorous, and granivorous animals. There are other teeth, appearing late in life, called "wisdom teeth;" but frequently these are not to be met with at all.

VALUE OF A FEMALE ADVISER.

It is a wondrous advantage to a man, in every pursuit or vocation. In woman, there is at once a suitable delicacy of tact, and a plain soundness of judgment, which are rarely combined to an equal degree in man. A woman, if she really is your friend, will have a sensitive regard for your character, honor and repute. She will seldom counsel you to do a shabby thing, for a woman friend always desires to be proud of you. At the same time her constitutional timidity makes her more cautious than your male friend. She, therefore, seldom counsels you to do an imprudent thing. By female friendships, I mean pure friendships—those in which there is no admixture of the passion of love except in the marriage state. A man's best female friend is a wife of good sense and good heart, whom he loves and who loves him. If he have that, he need not seek elsewhere. But supposing the man to be without such a helpmate, female friendship he must still have or his intellect will be without a garden, and there will be many an unheeded gap, even in the strongest fence. Better and safer of course, such friendships where disparities of years or circumstances put the idea of love out of the question. Middle life has rarely this advantage; youth and old age have. We may have female friendships with those much older and those much younger than ourselves. Moliere's old housekeeper was a great help to his genius; and Montague's philosophy takes both a gentler and loftier character of wisdom from the date in which he finds in Marie de Gournay an adopted daughter, "certainly beloved by me," says the Horace of essayists, "with more than paternal love, and involved in my solicitude and retirement, as one of the best parts of my being." Female friendship, indeed, is to man *"præsidium et dulce decus"*—bulwark, sweetener, ornament of his existence. To his mental culture it is invaluable; without it all his knowledge of books will never give him knowledge of the world.—[*Bulwer.*

Colors of Flowers.—The fugitive property of some colors is well known, and in no way better exemplified than as they naturally exist in flowers. The fume arising from a common sulphur match, which is, in fact, sulphuric acid, will change purple and crimson colors to pink. The blue, in combination with red, is readily discharged—indeed, a pink or purple flower might be completely bleached by holding it in the fumes of sulphur. Thus roses and dahlias have been made to assume a variegated and very novel appearance. Bright pink stripes and veins may be produced on the dark purple petals of pansies, and other dark-colored flowers, with a camel hair pencil and oil of vitriol, to yield rather a pleasing effect. Such lines should not be drawn to the edge of the petal, or a little injury will soon be evident, nor should they be strong nor near together, as they quickly spread.

A Pleasant Style of Dining.—The French have a pretty idea of dining. They don't make a solemn business of it as we Americans are apt to do. It is with them a joyous affair, enlivened with pleasant small-talk, wit and repartee. The table is gay with bouqets and wreaths, and the dishes being brought in hot from the kitchen and handed round to the guests, there are no lukewarm soups and meats and chilled gravies to disgust the palate, and no half denuded joints and skeletons of fish and fowl to offend the eye. At a ceremonious dinner every lady finds on her plate a fragrant nosegay. The dessert too—and a French dessert is as picturesque as it is delicious—is all arranged on the table before the meal begins. The dinner at this season usually opens with a course of little Ostend oysters, on the half-shell—a couple of dozen or so to each guest. Then comes the soups—such soups as are not prepared anywhere out of France. There is one made with little fresh-water lobsters, that is supreme. Fish succeeds, and then come the solids, if such etherial things as chicken and lobster fricasee with truffles and mushrooms, ragouts, haricots, white meats dressed with cream, brown meats stuffed and larded, and game, may be so called. Salads, the "fixings" of which would have reconciled Nebuchadnezar to vegetarianism, come next, and a long catalogue of delicate "goodies" closes the repast. Light wines are lightly dipped into during its progress, and light hearts give a zest to the entertainment. Englishmen dine lugubriously. So do we. Why can't we be merry over our meals, like the French. Mirth helps digestion.

"Less food," should be enjoined upon every one three times a day, and enforced, so general is the evil of eating too much. It is so with you, dear reader; you cannot deny the soft impeachment. If you can, it is because you are under the doctor's prescription. Less food certainly clears the mind. It certainly gives activity to the body. Thus, nervous people, who are generally lean, are active; and fat people, dumpish. For the student and literary person, light meals are indispensable—that is, you can't succeed intellectually if you gorge yourself. Our successful men know this, and take advantage of it.

Domestic Department.

GREEN TOMATO CATSUP.—1 peck green tomatoes (are best after they turn white before ripening), 1 doz. large onions sliced; sprinkle with salt, mix well and drain twelve hours; 1 box of mustard wet with vinegar, 1½ oz. black pepper, 1 oz. cloves, 1 oz. mustard seed, 1 oz. allspice, 2 pods red pepper; put in the kettle a layer of tomatoes and one of spices; alternate until all are in; cover them with strong vinegar, and boil hard twenty minutes; keep well tied up, and they will keep a year.

SWEET PICKLE.—10 lbs. of apples, or other fruit—peel and core the apples; 3 lbs. sugar, 3 pints strong vinegar, 1 oz. spice, 1 oz. cloves, 1 oz. cinnamon, ½ oz. mace, ½ oz. coriander seed; tie the spices tightly in a strong cloth, crush them; boil hard, until the fruit is scalded through, then take up the fruit and boil the syrup until thick, then pour while hot over the fruit; tie up closely; it is a most delightful pickle.

SWEET POTATO PIE.—Boil, peel and slice the potatoes, then fill a pie-pan with a rich paste; lay in the potato slices, cover with sugar; break up bits of butter the size of a hazel nut, and lay on the sugar; moisten the sugar by sprinkling on water; grate in a little nutmeg; 1 tablespoonful of good brandy to each pie; put on a top crust; eat a little warm.

SILVER CAKE.—1 teacup of butter, 2 loaf sugar, 4 flour, 8 whites of eggs, 1 teacup sweet cream, 1 teaspoon soda, 2 cream tartar.

LEMON PIE.—1 lb. sugar, ¼ lb. butter, 6 eggs well beaten, grate the rind of two lemons and squeeze the juice of three; bake in a rich pie paste.

SPONGE CAKE.—9 eggs, beat separate; 1 pint flour, 1 pint white sugar mixed with the flour; bake quick.

GINGER PUDDING.—4 eggs, 1 teacup sugar, 1 of molasses, 1 of buttermilk, 1 teaspoon soda, 1 tablespoon ginger, 1 teacup butter, 6 of flour; bake in a buttered pan. Sauce—1 teacup sugar, tablespoon of butter, a little water to moisten the sugar; boil till thick, then grate in a little nutmeg, and add a little brandy.

HOW TO MAKE ICE CREAM.—Ice cream is usually considered a luxury not to be indulged in by farmers' families. It is set down as a city dish, though most of the articles used in its preparation are obtainable from the country. It is not generally known that the best ice cream can be made without a costly freezer, in any family where ice and milk are at hand. To make it, proceed thus: Take two quarts of fresh milk—if a little cream be added all the better, though ice cream as ordinarily made is innocent of cream. Scald the milk, stirring in three table-spoonfuls of corn starch or arrow-root to give it body. These may be omitted, if not at hand. Stir well to keep from burning. Beat up four to eight eggs, according to convenience or as a rich dish is wanted, and pour the scalding milk on the eggs, stirring well. When cold add sugar and essence of lemon, or extract of vanilla, to suit the taste. A very little salt also improves it. Pour the cooled contents into a deep tin pail or can holding about three quarts; put on the cover, and set in an ordinary wooden water pail. Pound up ice to the size of hen's eggs and less—some of course will be quite fine—pack it around the tin can, mixing in about one pint of either medium or fine salt. Pack this till it reaches nearly to the top of the can containing the mixture to be frozen, but be careful none enters it. Now move the tin can or pail around by means of its bail, lifting the cover occasionally to scrape off the frozen cream on the inside, so that other portions may come in contact with the freezing surface. From fifteen to twenty minutes will be sufficient, and the dish may be served up at once or set away, without removing from the wooden pail, in a cool place for several hours, covering with a flannel cloth. Try it, and see if you need hereafter forego the ice cream because no freezer is at hand.

PUDDING FOR DINNER.—Save all the crusts and pieces of bread, brown or white, left from table, until enough are collected to answer for a pudding. Cover with milk, warmed; let stand for a couple of hours; add one or two cups of sour milk according to size desired; two eggs, also, and spice to taste. Thicken with flour, small teaspoonful of saleratus, and sugar or molasses may be added as preferred. If not previously sweetened, a sauce of melted butter, sugar and cinnamon thickened with a little flour is readily made. For pudding, two cups of sour milk, two eggs, one teaspoonful of saleratus, sweeten with good half cup of sugar or molasses, flour to suit taste; steam two hours and a half.

Pudding without milk made as above. In lieu of warm milk soak crusts in water, and add a lump of dough saved from former baking. Thicken with flour, use other ingredients as named, and improve by one more egg. Sauce, sweetened cream, or instead of sugar, butter and spice; requires about five minutes attention, on the stove. A cup of currants, berries or any kind of fruit is an improvement; steam hours two and a half.

I have eaten these puddings, made both ways, and find them a dish always in demand, especially when the family is large.

CREAM PIE.—Two cups sweet cream, two eggs, three table-spoonfuls white sugar, and a little salt. Put the cream in a small kettle on the stove; when it boils, pour in the eggs and sugar well beaten together. Let it boil about one minute, until it begins to thicken well. Have ready two crusts baked on separate plates. Spread the cream on one, flavor to suit the taste, and cover with the other.

CHEAP CIDER VINEGAR.—Take the water in which dried apples are washed and soaked, and after carefully straining, put in a vessel; add a pound of sugar, or its equivalent in molasses. Put in a piece of brown paper and set where warm. In a few weeks you will have good cider vinegar. More sugar will improve it. The vinegar will also be better the more concentrated the cider is. The strongest vinegar is made from boiled cider.

THE WAY TO "HEAD" BED BUGS.—If any of your readers need a sure remedy for bed-bugs, they can have mine, and cleanse the house of this troublesome vermin without expense. They have only to wash with salt and water, filling the cracks where they frequent with salt, and you may look in vain for them. Salt seems inimical to bed-bugs, and they will not trail through it. I think it preferable to all "ointments," and the buyer requires no certificate as to its genuineness.

PICKLED EGGS.—Boil the eggs until very hard; when cold shell them, and cut them in halves lengthwise. Lay them carefully in a large-mouthed jar and pour over them scalding vinegar, well seasoned with whole pepper, allspice, a little ginger and some cloves or garlic. When cold tie up closely and let them stand a month. They are then fit for use. With cold meat they are a most delicious and delicate pickle.

COFFEE SUBSTITUTE.—A writer says: The best substitute our family has tried, is brown bread crust, and we prepare it thus: As fast as the usual loaf is used for the table, cut up the crust—from the bottom and sides as well as the top—and bake it again in the stove oven till it is very brown—not black; then pound it in a mortar, and use as the burnt and ground coffee.

Editor's Table.

FAIR AT BELLEVILLE, ILLS.—The St. Clair Co. Agricultural Society will hold its next fair at Belleville, commencing Sept. 6th, and continuing four days. St Clair County is one of the richest counties in Illinois, and the people are wide awake, and appreciate the importance of getting together once a year and exhibiting their improvements in the quality of their stock, and in their farm, garden, and orchard products. We always attend the fairs of this Society, and feel at home there. Our highly esteemed friend S. B. Chandler, Esq., will accept our thanks for a copy of the Premium List. We hope to be present.

THE HONEY LOCUST FOR HEDGES.—An enterprising Nursery firm have propagated a large stock of plants of the above named TREE for hedges, and have sent their circulars far and wide, telling what a splended hedge it will make, and have got a number of certificates from gentlemen who also recommend it for hedging purposes.

We have seen a thorough and extensive trial of the Honey Locust for hedges, and we think it is entirely unadapted for the purpose. We have been punished for a long time by having one alongside of us, planted by a neighbor. The side branches die if thrown into a hedge shape, and the roots are the greatest exhausters of any tree with which we are acquainted. This tree is a native, here, attaining great size, and about as unfit for making a hedge as anything one could hit upon. We feel it due to our readers to give them our views and experience, so that if any of these circulars fall into their hands, they may have due time for consideration before purchasing.

FAIR AT EDWARDSVILLE.—The next fair of the Madison County Agricultural Society, will be held at Edwardsville, commencing on the 27th of Sept. We had the pleasure of attending this fair last year, and hope to visit it the present year. We have not yet received a copy of the Premium List.

TEACHER.—A young lady of much experience in teaching, writes us that she desires a situation for the ensuing fall and winter months. She is qualified to teach the common and higher English branches—but not music we believe. She is very highly recommended, and those wanting a good teacher, we think will find one in her. Those wanting a lady teacher will address the Editor of this Journal, giving full particulars.

GOATS WANTED.

I wish to purchase fifty Nannie Goats. Those having any to sell will please address me at St. Louis, stating price. NORMAN J. COLMAN.

FAIR AT CARLINVILLE.—The Macoupin County Agricultural Society, will hold its next fair at Carlinville, commencing on the 11th of October, and continuing four days. The fairs of this Society are always large and attractive.

SUBSTITUTES,

Promptly furnished, for three years, for any citizen of Missouri or Illinois, and CERTIFICATES OF EXEMPTION FROM DRAFT, obtained by N. J. COLMAN, 97 Chestnut Street.

HOW TO PLOW AMONG TREES.—A gentleman writing to the Farmers' Club of the American Institute, gives the following method of plowing among trees in rows: Hitch the traces full length directly to the plow, then take a crooked jack stick, like a piece of old scythe snath, two and a half feet long, sharpen each end so it will go into the links of the trace chains, then put it under the horse just forward of his hind legs, and stick each end in the chains; then get a stretcher about eight inches long, and put it as close to the plow as he can; this will give the horse plenty of room for his hind feet, and he can walk right against the trees and bushes and never injure them.

CORRESPONDENCE.

EDITOR VALLEY FARMER: The "Valley Farmer" for the month of August is before me, filled as usual with interesting and useful reading. Since my last, or rather my first letter, I have been on quite a tramp through Mississippi, and am now going to give you and your readers a short synopsis of the contents of that portion of the state through which I travelled. We left LaGrange, Tennessee, on the 5th of July, and moved in the direction of Pontoloc, Miss. The country through which we passed on our way thither, is well watered from clear-running springs; but the land is mostly rough, and from all appearances is not very suitable for farming purposes. The timber is very inferior for such a densely wooded country. Corn crops are very uneven; in some fields the corn was in good roasting condition, while in others it was scarcely two feet high. Wheat was thin on the ground, but well filled, and the grain was very good. I saw considerable smut in one or two fields. The wheat raised down here is a beardless kind, resembling the Goose wheat. Cotton is short everywhere and but little has been planted, the ground being mostly planted in corn. Potatoes and other garden vegetables are almost an entire failure, on account of the dry weather. Fruit is abundant everywhere. There will be a full crop of apples. Peaches are found in profusion everywhere, and are just getting ripe. Blackberries were no rarity on the whole expedition; no man need be without them, for enough grew along the roadside to supply every man in the army. They not only furnished the troops a delicious luxury, but contributed more towards the prevention and cure of diarrhea than all the doctors and medicine in the army. This is undoubtedly the best country for growing quinces in the United States, there is scarcely a farmer but what has quince trees; in no instance have I seen a tree that was not bending under its load of uniform fruit. Why can't we have such fruit in Mo? I believe it is equally as good for a variety of fruit as any State in the Union. When it shall have been properly tried by those who take an interest in fruit raising, I am of the opinion that Mo. will not only equal either of the States in this particular, but that it will surpass the best of them. During our entire expedition, the boys seldom went into camp without their rations of fruit; and never was an army of men more healthy than was the Right Wing 16th Army Corps during the expedition from LaGrange, Tenn., to Tupelo, Miss., and on the return. This is

conclusive evidence that fruit is more healthy than meat and other strong diet, that we eat when in camp. I don't want any person to think for a moment that I have intimated, or intend to, that we can do without meat entirely; but that too much of it is used, we will all admit—yet, if we could introduce fruit and vegetables in place of some of the strong unwholesome diet we use, we would, as a general thing, be healthier.

There was no rain down here to amount to anything during the months of June and July; but for the past week there has been some rain every day, and the prospect is good for a continuance of the same for some time to come. Crops here have suffered a great deal for want of rain. The late showers have instilled new life and vigor into vegetation which almost ceased to grow; but it has come too late to do the good that it would have done the crops, had it came three weeks sooner. Holly Springs, our present station, has been a nice little "dry weather" village; but its days of boasted wealth and prosperity are numbered among the things of the past; its extensive foundries, machine shops and storehouses, are no hing more nor less than a mass of decaying ruins. All that now remain of the public buildings is a Catholic Church and the Court House, both of which are so disfigured that they resemble some old waste barns more than public buildings. The private residences are in a somewhat better condition, not having been abused by the soldiery. The streets are regularly laid out and well shaded by wild Mulberry and Silver Maples. There are no sidewalks, and I would infer that wet weather would make it a mud hole surpassed by none except Benton Barracks, Mo. The country around here lays well, and has been in a high state of cultivation; but the fencing and in fact every thing near, has been destroyed by the army. I cannot tell you anything about the stock, as there is none here.

Yours Respectfully,

FRANCIS M. TROTH.

The following letter from a lady reader will be of interest to some of our readers:

Last winter my husband sent you $2 to send us a work on Poultry, and your Journal. We received the "Valley Farmer," paid for until the first of October; we wish to get it through the year, and will renew our subscription another year. I thin every farmer and gardener in the State ought to take it. We also received "Brown's Poultry Yard"—it is not just the thing an inexperienced person would want, yet I have learned a great deal from it, and feel that I have received the worth of my money. I never raised chickens until this year. I have 11 hens and 2 roosters; raised 150 chickens, have four hens setting now; had 200 hatched; the hens tramped a good many to death in the nest, and the the rats took many; had no sick ones except one brood; some 10 or 12 died when a week old; I examined one of them one day and found it covered with lice and nits. I greased the heads and nicks of the chickens, and under the hens' wings with lard; two of the weakliest died, the rest are thrifty. Since that time, I grease under the wings of every hen that sits, as soon as she has done hatching; have had no more trouble. I always remove the straw as soon as I take the hen from the nest, and keep my hen-house clean. I set down in a book when I set a hen—how many eggs I put under her, and how many chickens she hatches, so I can tell how many are hatched. I give my hens 13 eggs, and usually get 9 or 10 chickens; sometimes 7. I tie the hens to a stake, set a box near for her to stay in at night and in rainy weather; shut it up at night with a broad board, and do not let the chickens out until the grass is dry in the morning. I feed the chickens all they can eat, eight or ten times a day, and keep clean water near them constantly.

I give each hen from 18 to 22 chickens. A hen will take chickens that are not over two weeks younger than hers by putting them under her at night; none of my hens will take chickens that are larger than their brood. When I take the chickens from one hen to give to another, I shut the hen up under a box or barrel, and feed and water her sparingly for three days—that usually breaks them from setting, and in ten days, with good feeding, they begin to lay, and lay 15 or 20 eggs, and then set again. Some of my hens have set three times—I think will set once more before cold weather. They all lay every day when laying. Seven are of the small, old-fashioned kind. I like them best, they are easier fatted than the large kind, and, with proper management, lay every day, and only consume half the feed. I think they are much better to eat, being always fat and tender.

We have some 600 sweet potato hills; the vines are (some of them) from 20 to 25 feet long—some are flat and two inches broad. What shall we do with them, to check the growth of the vines, we are having too much wet weather for them? Some of my neighbors are pileing the vines on the top of the hills and throwing on dirt. I think that will act as a mulch and keep the hill too cool and damp. We bought a half bushel of the Nansemond from Plant & Bro., for which we paid $4 express charges and all. Every potato was rotting when we got them, and they were little strings; it was an unfavorable spring for a hot-bed. We only got six hundred plants from our bed; the potatoes rotted in the bed. We commenced setting out the 19th of May, and finished 21st of June. Our hills are very large, well pulverized, and well manured with stable manure that has lain out three years. The ground was plowed three times and harrowed; the hills are 4 feet apart from center to center, the largest hills I ever saw. Our Irish potatoes are all vines, no potatoes shaped. When ought they to be hilled up? Ours were planted on the 28th of May. We intend to bend the tops down and throw on a little dirt to keep them down; they have been in bloom a month. The corn crop will be heavy this year. A large crop of apples; no peaches, but few trees killed in this county last winter. No pears; trees uninjured. We have four large Bell pears; the fruit gets smaller every year. Can you tell me the cause? The earth is rich around them; we put a good many ashes around them last fall. I counted 12 pears on one tree, all very small; they were too full last year, when we bought this place. There are five thrifty cherry trees, (Morellos), which bore abundant crops until last year and this. The trees are now full of ripe fruit, but is no larger nor better than the wild cherry. We split the bark last fall, and cut off the dead switches, and cut down the sprouts that had grown up around them, the pears and apples. The apple trees are always full, but the soldiers, boys, and negroes do not leave any to ripen. Can you tell us what to do for our cherry trees? We have set out a great deal of shrubbery and fruit, the past spring; dug holes 4 feet broad and three deep, filled up with compost—all are doing well; the drouth in May and June did not injure them. We have an abundance of all kinds of vegetables. We have found out that the secret of a good garden is a rich, deep soil, and plenty of culture. We weighed a cantelope melon yesterday, 15½ lbs.; have two squash vines, that have four squashes apiece, that I believe will weigh over 50 lbs. each; raised two crops of lettuce on the bed, and then planted two choice squash seed; have promise of a very abundant crop of squash in the corn field.

Do you believe there are cows in this country that will yield 12 or 15 lbs. of butter per week, with high feeding; if, so, what breed; and can you give me any idea as to what one would cost, and who has them for sale? We keep our cows as fat as a beef the year round; have never made over eight pounds a week from one cow. What breed of hogs can you make weigh 200, at six months? I had some Berkshires that weighed 180 at seven months; fed them corn, milk and pushy, all they would eat.

This is our first year of farm life; never want to live in the heart of a town again; am now half a mile from the business part of town. T. B. P.

Macon City, Mo. Aug. 18, 1864.

THE ST. LOUIS NURSERY.

We have a superior stock of TREES for sale the present fall, embracing all the popular kinds adapted to cultivation in the West. It has been a leading idea with us, to discard all varieties not adapted to our climate, however well they may succeed in the Eastern States, knowing that we have plenty of varieties for all seasons, that do succeed admirably here.

Our stock of APPLES is large, price 25cts. each, $20 per hundred. We have the best assortment of Market varieties of PEACHES in the West. We can give a complete succession of varieties, from the very earliest to the very latest. A large stock of that popular new variety, Hale's Early, at 40 cts. each. Price of peach trees by the 100, $25. They are of fine size and quality. Of PEARS, Standard and Dwarf; CHERRIES, PLUMS, APRICOTS, NECTARINES, and QUINCES, we have a fair supply.

Our stock of SMALL FRUITS is very large. We are cultivating these largely for the St. Louis Market, and our supply is very large and superior.

Orders thankfully received. For further particulars, address,

N. J. COLMAN & Co., St. Louis, Mo.

CONTENTS OF NO. 9.

Agricultural.

Deep Cultivation, - - - - 257
Meteorology, - - - - 258
Discussion on Husbanding Manures, - 261
An Ice House; The Crops at Villa Ridge, Ill., 262
The Practical in Farming; Harvesting Sorgho; Shingles Rendered Fire-proof, - 263
Wheat—Good Seed; Curing Corn Fodder, 264
Water Witches; A Spring for Stock; Meadows, 265
Dispersion of Seeds; Teachers' Institutes, 266

Stock Department.

Grubs in Sheep; Wounds in Horses, - 267
Treatment of Colts, - - - 268
Devon Cattle, - - - - 269
Chapter on Hard Milkers, - - - 270
A Bully Team; Good Milkers; Sweenie Cure, 271

Horticultural.

Fruit from Woodburn, Ill., - - 272
Squash Bug Trap; The 10-striped Spearman; The Taylor Grape, - - - - 273
Raspberries and Blackberries; The Golden Age of Fruit Culture, - - - - 274
Taking up Bulbs; Purple Cane Raspberry; Hale's Early Peach, - - - - 275
Grafts Controlling the Stock, - - 276
Mushroom and other Fungi, - - 277
Gathering and Keeping Fruit, - - 278

Home Circle.

Nature's Change; Thistle-Down, - - 279
Uses of Ice; Making Bread, - - 280
Woman Culture, - - - 281
The Brave at Home; An Eye for Nature, 282
Smiles; Scraps, - - - - 283
Value of a Female Adviser; French Dinners, 284
Domestic Department, - - - 285

Editor's Table.

The Honey Locust; Correspondence, - 286

TO TOBACCO GROWERS.

TOBACCO CULTURE,

Adapted to the

Northern Section of the United States,

And the most improved method of

Managing a Crop to Fit it for the Market.

Second Edition Revised, just published, and for sale

By CHAS. W. CORNELL,
No. 19, S. Salina St., Syracuse, N.Y.

Single Copies, 25 cts., mailed free on receipt of price, to any address.

☞ Orders from the trade solicited, to whom a liberal discount will be made. [aug8

GEO HUSMANN. C. C. MANWARING.

HERMANN NURSERY.

HUSMANN & MANWARING, Proprietors,
HERMANN, MO.

Having much increased our business, we take pleasure in calling the attention of our friends, and the public generally, to our large and complete assortment of Fruit and Ornamental Trees and Shrubs comprising the choicest varieties of
Apples, Pears, standard and dwarf; Cherries, standard and dwarf; Peaches, Plums, Apricots, Almonds, Quinces, Grapes, Currants, Gooseberries, Raspberries, Strawberries, Blackberries, Shade and Ornamental Trees and Shrubs, Evergreens, Vines and Creepers, Roses, Dahlias, and other Plants, Scions of Fruit Trees, Cuttings and Seedlings of Ornamental Trees, Shrubs, &c.

Most of the varieties were tested here, and have proved successful in our soil and climate, and all are warranted true to name.

We would call the special attention of Grape Growers to our large assortment of native hardy grapes, comprising over sixty of the choicest varieties, which we have spared no pains nor cost to procure from the most reliable sources. Many of them have been tested here, and all will be tested in the open vineyard, and we shall recommend none until we have found them successful. This we may now confidently do with Norton's Virginia, Herbemont, Missouri and Concord, they having been tested beyond a doubt.

Descriptive Catalogues sent gratis to all applicants.

Orders directed to us personally or to our local agents, will be promptly and carefully filled.

HUSMANN & MANWARING.

Hermann, Sept. 1859.

E. W. SPALDING,

MERCHANT TAILOR,

Has removed to

No. 16 North Fifth Street, opposite the Courthouse,

[1ypdfeb64] SAINT LOUIS, MO.

☞ I have a splendid stock of GRAPE VINES, PEAR, PLUM, PEACH, CHERRY, APPLE TREES, and other Nursery Stock, at low prices. Send your orders to J. M. JORDAN, St. Louis, Mo.

Book and Job Printing,

At Reasonable Prices, and in good style, at this office.